THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—Liebig.

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Cattle Show and Exhibition of the N. Y. State Agricultural Society at Utica.

To the Editor of the Farmers' Cabinet:—

Dear Sir,—Having attended this grand Exhibition at Utica, on the 16th, 17th, and 18th ult., I snatch a few moments from onerous engagements that assert an unrelaxing claim to every effort of my overworked frame, to give a brief outline of the character and spirit of the agriculturists of New York. How gratifying would it have been to have met at Utica a portion of the substantial farmers of Pennsylvania, looking on and inspecting with me the contributions in every department of husbandry, made by the farmers, their wives and children, to the great Cattle Show and Fair of the New York State Agricultural Society; for then might I hope that such an example and such cheering results would inspire them to rouse up, and in like manner elicit and develope the rich but latent agricultural resources of the Keystone State. Then might I hope that even before I had shuffled off this mortal coil, Lancaster, Reading, Easton, York, Pittsburg, &c., &c., would become the theatres of similar scenes with Albany, Rochester, Poughkeepsie, and Utica, exhibiting the triumphs of a well directed State policy, an enlightened and profitable agriculture, and a spirited and generous yeomanry—but clouds and darkness rest upon this hope; for while New York leads so gloriously and exhibits such convincing proofs of the wisdom and patriotism of her legislation in the encouragement of Agricultural Societies,* Pennsylvania stands spell bound in the toils of party spirit and faction—a spirit which produced corruption and oppression at home through *funding* and *financiering*, and the sneers and contempt of those abroad, who loaned the money which politicians made use of to pander to party ascendancy or individual aggrandisement. While Virginia is beginning to awake to a proper sense of the true interests of a State—the promotion of its agriculture—the farmers of Pennsylvania drudge on in dogged toil to pay the taxes brought upon them by improvident legislation, which they themselves from time to time sanctioned and sustained, in the spirit of party at the polls. When shall they shake off the yoke of faction and party discipline, and eschew the intrigues of the

* The State of New York expends annually, seven to eight thousand dollars upon her Agricultural Societies.

demagogues, who present to them annually a ticket for their support which, if successful, affords no hope of improvement in their condition, for it never properly or proportionably represents the great and leading interests of agriculture, nor of those, the honest industrious, who compose the most numerous class. The farmers of New York act differently; they cause themselves to be felt, heard, and understood. The merchant, manufacturer, and professional man, are made to acknowledge their value, and bow with due submission to their intrinsic and popular importance. But to the Exhibition.

The town, or city of Utica, like all others in Western New York, looks fresh and beautiful, from its having within the last twenty years, risen from a few straggling houses among stumps, to its present size of broad and well paved streets, closely built with attractive warehouses, stores, hotels, and public buildings, and numerous private residences of great beauty, containing a population of some thirteen to fourteen thousand. It is situated upon the Mohawk river, and is distant from Albany about ninety miles. Its central position, backed by such an agricultural district as Oneida, led to great hopes of a large contribution and a numerous attendance; and in this there was no disappointment. The citizens of Utica subscribed liberally towards the expenses of the Exhibition, and made every possible arrangement to accommodate the Agricultural Society and the visitors in general; and in doing this, while they manifested a generous hospitality, they showed a cleverness and good sense equally creditable; for I doubt not, but Utica was the recipient of more than fifty thousand dollars, expended and left by those who sojourned within her borders during the Exhibition, while it is impossible to estimate the vast results growing out of this great Agricultural Show, in the stimulus it will impart to the skill and enterprise of the agricultural district of which she is the centre.

To give you some idea of the number of persons who witnessed this Exhibition, it is only necessary to state that the Society, as I learned, added to their funds something over three thousand dollars, for admissions to the grounds, at twelve and a half cents for each visitor, independent of members and contributors, who with their families had free admission. I found individuals, and in many instances, families, husbands and wives, brothers and sisters, from almost every part of the State of New York, and not a few from Canada. To hint at the spirit of New York, I need but remark, that all the rail-road companies volunteered to carry cattle, horses, hogs, sheep, agricultural implements, butter and cheese,—every thing to be exhibited—from any distance within their respective lines, free of all charge; not only this, but every individual who visited the Show, was carried to and from Utica, at half the usual fare. In what other place except New York, could a corporation be found to act thus patriotically and generously? When I saw the immense trains arriving constantly, filled with huge oxen, fat steers, and stock of all kinds, set down *free*, the agents as courteous, civil and bland, as if they had made a most comfortable and profitable trip, instead of having had unusual and vexatious trouble in taking in and discharging cargo, and *no freight*; I began to think there was no insolence of office in New York, and that there were exceptions to the sweeping imputation, that certain bodies had no souls.

Among the cattle exhibited, the first class, Durhams, took the lead, as indeed they do everywhere. Where there are no Durhams, the exhibition in cattle will always look mean and meagre to the eyes of those who are familiar with this noble breed. The principal contributors to this class, were Mr. Prentice, of Mount Hope, Mr. Vail, of Troy, Mr. Sherwood, of Auburn, Messrs. Bell and Morris, extensive dairymen of Westchester, near the city of New York; Mr. Ballard, of South Port, Mr. Carey, of Marcy, Mr. Nicholas, of Geneva, Mr. Brinkerhoff, of Albany, and Mr. Wakeman, of Herkimer, to whom were awarded the principal premiums. Mr. Wadsworth, of Genesseo, formerly president of the Society, exhibited ten yoke of oxen of such size, form, and training, as not only did great credit to himself, but reflected favourably on the whole State—they were awarded the first premium. The Herefords and Ayreshires were represented; the former by Mr. Corning's cattle, the latter by Mr. Bement, an enlightened agriculturist, now the obliging host of the American Hotel, Albany, one of the best houses, if not the very best, for cleanliness, comfort and cooking, in the city. The Red cattle, or Devons, with sundry grades were numerous, one or two of the Devon bulls were very good animals of their class. The sheep, to my view, were very superior, and consisted of various distinct and improved breeds. It was regretted, however, that Mr. Randall, of Courtland, did not exhibit a portion of his celebrated Merinoes—they would, as at Poughkeepsie, have attracted much attention. The horses, from the thorough-bred stallion, down to the special draught horse, were superior and numerous—horses, mares, geldings, and colts, were on the ground from

all quarters, and were shown under favourable circumstances. The committee of judges in this department, had an arduous task in deciding upon the merits of the respective animals; the committee, however, was a strong one, and had at its head Col. Sherwood, of Auburn, reputed as one of the best judges in the country. The ploughing match was spirited and interesting; in no part of the United States, it is believed, could so many superior ploughs, ploughmen, and teams, be exhibited, as competed for the prizes at Utica. Mr. Delano's Improved Diamond Sod Plough took the first premium; he exhibited also a Cross Plough, for fallow or broken land, which to my liking, was the best I ever saw.

The Flora and Pomona Hall was a beautiful affair, tastefully festooned and decorated by the ladies of Utica. The fruits and flowers were creditable offerings, but of course, fell short of the special Horticultural Exhibitions of Philadelphia. But then the Farmers' Hall, where were exhibited the butter, cheese, and dairy utensils of Oneida and adjoining counties:—Where and how could it be surpassed? Nowhere, take it all in all, I'll answer for it. A Pennsylvania farmer can form no adequate idea of the capital employed in cheese making alone, nor the perfection to which this part of dairy husbandry is carried. The women seemed more interested in this department than the men, and I cannot withhold from them the meed of well merited praise for their tidiness, their affability, general intelligence and good looks. If I had to choose a wife, I would go among the Yankees or to Western New York, which I believe would be the same thing; and could I do no better, would, as Jacob did of old, serve some Laban for a Rachel.

Fortunately the weather was very propitious, uninterruptedly fine throughout the three days, until near the close of the third, as Mr. Gowen, chairman of the committee on first class of cattle, had finished reading his Report, there came up a shower which induced the president to suggest a removal from the open ground to the halls. It soon cleared away again, the sun shone out, and the moon succeeded, and reigned throughout a beautiful night, making pleasant the journey of thousands, who left Utica by railroads, canals, stages, and private conveyances for their homes, which I hope they all reached in safety, pleased with their agricultural excursion.

The Hon. Josiah Quincy, jr., made the annual Address. It was listened to with marked respect and attention. It bore principally on the social and moral condition of the farmer, was ingeniously compiled, and well delivered; some might think it rather puritanical, the Scriptural allusions being many; yet none of them could be held as inappropriate.

The State of New York, nay the whole agricultural community, are indebted to the officers and members of the State Society for their industry, perseverance and management, in carrying out so ably the great work of improvement, by means of these grand Exhibitions, which speak in such intelligible language to so many thousands at once, of what *has*, and what *can* be done in the various departments of agricultural science and domestic economy. While all the officers are entitled to much praise, I would in a special manner notice the able and efficient labours of the president, B. P. Johnson, Esq., and of Luther Tucker, recording secretary, favourably known to agriculturists, as editor of the Albany Cultivator.

However glad to have brought this rapid sketch to a close, I cannot resist telling you, that pending the Exhibition I visited the Falls of Trenton, distant from Utica about fifteen miles. I shall not attempt any thing like a description of these sublime and enchanting Falls, for even had I the time at command, there would be wanting the ability to do justice to them; and in saying this, it affords no comparative idea to your readers of the splendor, richness, and variety of the scenery that nature has so luxuriantly thrown together in the sweetest and wildest form that can be imagined; no human penciling could give any thing but a faint and imperfect sketch of their grandeur and beauty. He who would desire to see nature in her wildest, chastest mood, must gaze upon her as I have done in her most felicitous display —the Trenton Falls—and if he can say that I raised an expectation that was not more than realized, I shall acknowledge myself an enthusiast, and consider him as proof against all the influences that combine to dazzle and delight the common mind!

What a world is New York—her agriculturists and merchants—her public works—her territory and population—her bays, rivers, and lakes—she is indeed "Land of the mountain and the flood!" And compatible with all these are her public spirit and enterprise —the munificence and hospitality of her generous and enlightened citizens.

J. G.

Philadelphia, October 1st, 1845.

Woollens should be washed in very hot suds and not rinsed. Lukewarm water shrinks them.

Efficacy of Ammonia in cases of Poison.

Extract of a letter from Dr. Church to the Editor of Silliman's Journal of Science, dated Cooperstown, N. Y., February 6th, 1829.

A young man in this place had accidently overset a hive of bees, and before he could escape, they had settled, in great numbers, on different parts of his body and limbs and stung him very severely. It was about half an hour after the accident happened, when he came to my office in great agony, and he had scarcely time to give an account of it before he fainted. I immediately applied the ammonia to the parts that had been stung, his legs, arms, and breast. He directly recovered from his faintness, and experienced no pain or other inconvenience afterwards.

It is several years since I first used the aqua ammonia, to counteract the effect of the bites of insects and stings of bees, and it has invariably produced instant relief—generally complete. I have often seen children crying in excessive pain from the sting of a bee, and on application of the ammonia they would immediately cease complaining and become cheerful, so complete and sudden is the relief it produces. I always use it for mosquito bites, and they never trouble me farther. I was led to use it in these cases, from the instantaneous effect it was said to have in counteracting the operation of prussic acid. In the second number of the American Journal of Medical Sciences, (Philadelphia,) for the last year, it will be seen that Dr. Moore, of Alabama, used it with great success in the cure of bites of venomous serpents. From his account, it is probable that the pure uncarbonated aqua ammonia is most efficacious. I have sometimes noticed, and think it must be on account of its being sometimes carbonated and at others not.

Water in a Sheep's Head.—Mr. John Scurr, farmer, of Greenside Trimdon, near Sedgefield, a short time ago had a sheep, which, for a fortnight had been ill. Three days it was unable to get upon its feet. Mr. Scurr happened to have a friend who called upon him on business, and they together went to see the sheep. His friend pronounced the animal all but dead, it being ill of the "sturdy," or water in the head, which he said was incurable. They consequently left the sheep to die. A servant boy, named Gilpin, who lived with Mr. Scurr, overheard their discourse, and immediately went to his master's house and procured a gimblet, when he returned to the field where the sheep was, and, without practice or skill in the art, began cautiously to operate upon the head of the animal, by boring a hole exactly upon the top of the scalp, which done, the water streamed out of the head, and, strange to say, in a very few minutes the sheep got upon its feet and started to eat grass, and is now doing as well as any of its fellow grass eaters.—*New Farmer's Journal.*

To diminish the Draught of Ploughs.—We may consider that upon an average, 35 per cent. of the labour of ploughing is attributable to the weight of the implement, 55 per cent. to the operation of cutting the furrow-slice, and only ten to the action of the mould board. This conclusion, if it be correct, reverses most of our pre-conceived opinions on the subject: the attempts which have been made to diminish the draught of ploughs have been mostly directed to the alteration of the form of the mould board; let our plough-makers direct their efforts more to facilitate the action of the sock and coulter, and to diminish, within safe limits, the weight of the implement, and they will, probably, be more successful in lessening its draught.—*Gardeners' Chronicle.*

Windows Cleansed by Steam.—A very simple method of cleaning windows is now coming into general use in England. The window is first dusted with a bunch of feathers or dusting brush, and when the dust is thoroughly removed, place a bowl of boiling hot water at the base of the window; the steam immediately covers the glass, which is removed by a wash leather, and finished off with another quite clean and dry. The method saves time, prevents that cloudy appearance left by whiting, and produces a more brilliant and durable polish than any other.

Animal Gratitude.—An English writer says, "Animals are so capable of showing gratitude and affection to those who have been kind to them, that I never see them subjected to ill treatment without feeling the utmost abhorrence of those who are inflicting it. I know many persons who, like myself, take a pleasure in seeing all the animals about them happy and contented. Cows will show their pleasure at seeing those who have been kind to them, by moving their ears gently, and putting out their noses. My old horse rests his head on the gate with great complacency when he sees me coming, expecting to receive an apple or a piece of bread."

Decrease of Temperature in the superior Strata of the Atmosphere.

The temperature rises rapidly as we ascend in the atmosphere; places among the mountains always possess a climate more severe as they are higher above the level of the sea. Even under the equator, height of position modifies the seasons so much, that the hamlet of Antisana, which is within one degree of south latitude, but which is upwards of 13,000 feet above the sea level, has a mean temperature which does not differ much from that of St. Petersburgh. Near it, but at a still greater height, the summit of Cyambe, covered by an immense mass of everlasting snow, is cut by the equinoctial line itself.

The cold which prevails among lofty mountains, is ascribed to the dilatation which the air of lower regions experiences in its upward ascent, to a more rapid evaporation under diminished pressure, and to the intensity of nocturnal radiation.

Places which are situated upon the same mountain-chain, nearly in the same latitude, and at the same height, have often very different climates. The temperature which would be proper to a place perfectly isolated, is necessarily modified by a considerable number of circumstances. Thus the radiation of heated plains of considerable extent, the nature of the colour of the rocks, the thickness of the forests, the moistness or dryness of the soil, the vicinity of glaciers, the prevalence of particular winds, hotter or colder, moister or drier, the accumulation of clouds, &c., are so many causes which tend to modify the meteorological conditions of a country, whatever its mere geographical position. The neighbourhood of volcanoes in a state of activity does not appear to affect the temperature sensibly; thus Puracé, Pasto, Cumbal, which have flaming volcanoes towering over them, have not warmer climates than Bogota, Santa Rosa, De Osos, Le Param de Hervè, &c., situated on sand-stone or syenite.

From the whole series of observations which I had an opportunity of making on the Cordilleras, it appears that one degree of temperature, cent., 1.8° F.,* corresponds to 195 metres, or 649.4 feet of ascent among the equatorial Andes. In Europe, it has been ascertained that the decrease of temperature in ascending mountains, is more rapid during the day than during the night —during summer than during the winter; for example, between Geneva and Mount St. Bernard, to have the Fahrenheit thermometer fall one degree, it is necessary to ascend:

In spring	326.1 feet.
In summer	336.6
In autumn	382.2
In winter	424.2

It sometimes happens, however, that in winter, in a zone of no great elevation, the temperature increases with the elevation—a fact which Messrs. Bravais and Lottin observed in the 70° of N. lat., in calm weather; at an elevation between 1312 and 1640 feet, the rise amounted to as many as 6° centigrade, 10.8° Fahrenheit.

In no part of the globe is the diminution of temperature, occasioned by a rise above the level of the sea, more remarkable than among equatorial mountain ranges; and it is not without astonishment that the European, leaving the burning districts which produce the banana and cocoa-tree, frequently reaches, in the course of a few hours, the barren regions which are covered with everlasting snow. "Upon each particular rock of the rapid slope of the Cordillera," says M. de Humboldt, "in the series of climates superimposed in stages, we find inscribed the laws of the decrease of caloric, and of the geographical distribution of vegetable forms."

In the hottest countries of the earth, the summits of very lofty mountains are constantly covered with snow; in the elevated and cold strata of the atmosphere, the watery vapor is condensed, and falls in the state of hail and snow. In the plain, hail melts almost immediately; the fusion is slower upon the mountains; and for each latitude there is a certain elevation where hail and snow no longer melt perceptibly. This elevation is the *inferior limit of perpetual snow.*

The accidental causes which tend to modify the temperature of a climate, also act in raising or lowering the snow-line. On the southern slope of the Himalaya, for example, the snow-line does not descend so low as it does upon the northern slope; and in Peru, from 14° to 16° of S. latitude, Mr. Pentland found the perpetual snow-line, at an elevation of 1312 feet higher than it is under the equator.

Elevation above the level of the sea, consequently, has the same effect upon climate as increase in latitude. Upon mountain ranges, vegetation undergoes modification in its forms, becomes decrepit, and disappears towards the line of perpetual snow, precisely as it does within the polar circle, and for no other than the same reason, viz., depression of temperature.

The constancy and the small extent of

* 1° of Centigrade thermometer is equal to 1.8° F.

variation which occurs in the temperature of the atmosphere under the equator, enable us to indicate with some precision the point of mean temperature below which there is no longer any vegetation. In ascending Chimborazo, I met with this point at the height of 15774.5 feet, where the mean temperature approached 35° F., and where consequently the saxifrages, which root among the rocks, must still receive a temperature from 41° to 43° F. during the day, inasmuch as far beyond the inferior snow-line, at an elevation of 19,685 feet above the sea-line, I saw a thermometer suspended in the air, and in the shade mark 44.6° F.

In considering the extension of vegetation towards the polar regions, we discover plants growing in very high latitudes in places which have a mean temperature much below that which I believe to be the limit of vegetable life on the mountains of the equatorial region. In these rigorous climates vegetation is suspended by the severity of the cold during the greater portion of the year; it is only during the brief and passing heat of summer that the vegetable world wakes from its long winter sleep. Nova Zembla, lat. 73° N., the mean temperature of whose summer is between 34° and 35° F., is, perhaps, like the perpetual snow-line of the equator, the term of vegetable existence. It is also to the very remarkable heat of the summer in countries situated at the northern extremity of the continent of Asia, remarkable if it be contrasted with the intensity of the winter cold, that man succeeds in rearing a few culinary vegetables in those dreadful climates. At Jakoustk, in 62° of N. lat., and where mercury is frozen during two months of the year, the mean temperature of summer is very nearly 64° F. We have here, as M. de Humboldt observes, "a well characterized continental climate," examples of which indeed are frequent in the north of America. At Jakoustk wheat and rye sometimes yield a return of 15 for 1, although at the depth of a yard the soil which grows them is constantly frozen.

The limit of perpetual snow being much lower upon the mountains of Europe than in tropical countries, agriculture ceases at a much less elevation. At a height of 6,560 feet above the level of the sea, the vegetables of the plain have almost entirely disappeared. In Northern Switzerland the vine does not grow at an elevation of more than 1,800 feet above the sea-line; maize scarcely ripens at an elevation of 2,850 feet, while in the Andes it still affords abundant harvests at an elevation of 8,260 feet. On the plateau or table land of Los Pastos, fields of barley are seen at upwards of 10,000 feet above the level of the sea; but on the northern slope of Monte Rosa, in Switzerland, barley fails at an elevation of about 4,260 feet; on the southern slope, indeed, it reaches a height of about 6,560 feet; and this great variation in the ultimate limit of barley is frequently observed with reference to the same plant grown upon opposite aspects of a mountain range.—*Boussingault's Rural Economy.*

From the Boston Cultivator.

A Day at the Reybolds in Peach Harvest.

Desirous of affording our readers the means of forming some idea of the magnitude and importance of the Peach business of Delaware, we lay before them the details of "A day spent at the Reybolds in Peach harvest."

We took passage from Philadelphia by the steamer Pioneer, at Arch street wharf, at seven o'clock on the morning of the 29th of August, Reybold's wharf adjoining being full to overflowing with his empty baskets in transitu; passing the steamer Napoleon, which had arrived at the rail-road wharf on the Camden shore, and was discharging her lading of 3,000 baskets of Reybold peaches for the New York market. During the passage to Delaware City we were continually meeting boats of different descriptions loaded with peaches for the Philadelphia market. We reached the wharf at 11 o'clock, forty miles below Philadelphia, where it was with difficulty that we could pass along it, for the rows of baskets of Reybold's peaches three tiers in height, and extending about one hundred yards in length, flanked with carriages, from the six-ox and six-mule wagons, counting their 125 baskets each, to the single-horse cart or dearborn with its score or two awaiting their turn for unloading; reloading with empty baskets and driving furiously back for more—a scene which bade defiance to imagination.

Here we found the Reybolds loading a sloop, which departed for Philadelphia with 1,230 baskets only, to make room for the Cohansey steamer, on board which were placed 1000 baskets more; and then they began to prepare the evening's loading for the Napoleon, that had returned from Philadelphia during the day, on which were put 1,700 baskets from the orchards of Messrs. John, Philip, Jr., William, and Barney Reybold, when she proceeded to the wharf of Major Reybold, which is situated in the midst of his orchards, to complete her loading—another 1,490 baskets, starting for Philadelphia, so as to be again in the market

before daylight next morning, with a total of 3,190 baskets.

The details of this day's shipment, therefore, are as follows:

On board the sloop,	1230
On the steamer Cohansey,	1000
On the steamer Napoleon,	3190
Total,	5420 baskets,

from the Reybold orchards only. These all reached their destination before daylight next morning, consigned to Mr. Anthony Reybold, by whom they were disposed of before 11 o'clock, at 16 to 31 cents per basket, containing about three and a half pecks each.

From the books of Major Reybold and his sons were ascertained the following remarkable facts: Quantity of peaches sent to market to the 29th of August inclusive—

Major Reybold, from his Maryland and Delaware orchards,	31,145
John Reybold,	13,300
Philip Reybold, Jr.,	6,000
William Reybold,	5,699
Barney Reybold,	7,200
Total number of baskets,	63,344

Number of baskets employed for transit, 40 to 50,000.

Number of acres of orcharding,	1,090
Number of trees in orchards,	117,720

Business detaining us in that part of the country, we returned to Delaware City on the 31st, and found the Reybolds loading two large steamboats at the wharf—the "Napoleon" for Philadelphia, and the "Mutual Safety" for New York, direct by sea; the latter, of 700 tons burden, leaving with 3,581 baskets on board, the former, completing the shipment for that day, a total of 4,075 baskets, having taken the day before, her usual loading of near 3,000. Here we saw three steamers loading with peaches at the same time, while the empty return baskets had numbered 16,000 within the last 24 hours. Major Reybold has it in contemplation to start a large steamer with peaches direct to Boston! Success attend him.

JAMES PEDDER.

Philadelphia, Sept. 1st, 1845.

Mustard Crop in Ohio—Prices offered for the seed in Philadelphia.

In the last volume of the Farmers' Cabinet, No. 3, page 99, will be found an interesting account of J. H. Parmlee's crop of Mustard last year.—ED.

WE have made inquiries respecting the success of our friends who attempted the cultivation of Mustard seed in this State the present season, and we learn that although some failed entirely, owing to the frosts and drought, the majority have succeeded remarkably well considering the unfavourableness of the season, and their want of experience in the business. The following are the principal lots:

Mr. Parmlee, Duncan's Falls,	27 acres.
Mr. Buckingham, Putnam,	9 "
Mr. Ely, Chillicothe,	15 "
Mr. Myers, Canton,	7 "
Three or four smaller lots, say	12 "

Making in all 70 acres; and there may be other lots in the State, of which we have not heard. Mr. Parmlee's crop is about as good as last year, say 14 bushels per acre. Mr. Buckingham's is nearly as good. Mr. Ely's, and the smaller lots, were somewhat injured; we have not learned the amount of the yield; probably not over seven to ten bushels per acre. This will give, for the whole amount 700 bushels.

Now for the markets. We have just received a letter from Messrs. C. J. Fell & Co., of Philadelphia, in answer to one from us, in which they generously say, that although the market price for seed is not yet established—and it may range lower than last year—yet, inasmuch as they may have been instrumental in inducing some Ohio farmers to engage in its cultivation, with the expectation that the same price would be given this year that was paid Mr. Parmlee last year, they now offer to pay that price—eight cents per lb. in cash—for all Ohio seed that may be sent them *of as good quality*—as heavy and clean—*as was Mr. Parmlee's last year*; to arrive at Philadelphia not later than the first of November. For seed of a less perfect quality they will pay a proportionate price; and to avoid any dissatisfaction, they offer to let the weighmaster send us samples of the lots that arrive, and have us compare them with seed of Mr. Parmlee's last year's crop, and say what deduction ought to be made in the price.

The seed should be packed in good strong flour barrels, and shipped by way of Pittsburg. The cost of transportation from Pittsburg to Philadelphia, is 60 cents per hundred weight.—*Ohio Cultivator.*

LIQUID MANURE.—The Chinese, who are particularly skilful in the management of manure, are extremely careful not to waste the smallest portion; and, according to Sir George Staunton, they prefer the dung of birds to that of all others, and next to that, night soil, which they apply in a liquid state.

The Van Mons Theory.

Dr. Van Mons, Professor at Louvain, devoted the greater part of his life to the amelioration of fruits. His nurseries contained in 1823, no less than two thousand seedlings of merit. His perseverance was indefatigable, and experimenting mainly on Pears, he succeeded in raising an immense number of new varieties of high excellence. The Beurré Diel, De Louvain, Frederic of Wurtemberg, &c., are a few of the many well known sorts which are the result of his unwearied labours.

The Van Mons theory may be briefly stated as follows:

All fine fruits are artificial products; the aim of nature, in a wild state, being only a healthy, vigorous state of the tree, and *perfect seeds* for continuing the species. It is the object of culture, therefore, to subdue, or enfeeble this excess of vegetation; to lessen the coarseness of the tree; to diminish the size of the seeds; and to refine the quality and increase the size of the flesh or pulp.

There is always a tendency in our varieties of fruit trees to return by their seeds towards a wild state.

This tendency is most strongly shown in the seeds borne by *old* fruit trees. And "the older the tree is of any cultivated variety of Pear," says Dr. Van Mons, "the nearer will the seedlings, raised from it, approach a wild state, without however, ever being able to return to that state."

On the other hand, the seeds of a young fruit tree of a good sort, being itself in the state of amelioration, have the least tendency to retrograde, and are the most likely to produce improved sorts.

Again, there is a certain limit to perfection in fruits. When this point is reached, as in the finest varieties, the next generation will more probably produce bad fruit, than if reared from seeds of an indifferent sort, in the course of amelioration. While, in other words, the seeds of the oldest varieties of good fruit mostly yield inferior sorts, seeds taken from recent varieties of bad fruit, and *reproduced uninterruptedly for several generations*, will certainly produce good fruit.

With these premises, Dr. Van Mons begins by gathering his seeds from a young seedling tree, without paying much regard to its quality, except that it must be in a *state of variation*; that is to say, a garden variety, and not a wild sort. These he sows in a seed-bed or nursery, where he leaves the seedlings until they attain sufficient size to enable him to judge of their character. He then selects those which appear the most promising, plants them a few feet distant in the nursery, and awaits their fruit. Not discouraged at finding most of them of medium quality, though differing from the parent, he gathers the first seeds of the most promising and sows them again. The next generation comes more rapidly into bearing than the first, and shows a greater number of promising traits. Gathering immediately, and sowing the seeds of this generation, he produces a third, then a fourth, and even a fifth generation, uninterruptedly, from the original sort. Each generation he finds to come more quickly into bearing than the previous one,—the fifth sowing of pears fruiting at three years,—and to produce a greater number of valuable varieties; until in the fifth generation the seedlings are nearly all of great excellence.

Dr. Van Mons found the pear to require the longest time to attain perfection, and he carried his process with this fruit through five generations. Apples he found needed but four races, and peaches, cherries, plums, and other stone fruits, were brought to perfection in three successive reproductions from the seed.

It will be remembered that it is a leading feature in this theory that, in order to improve the fruit, we must *subdue or enfeeble* the original coarse luxuriance of the tree. Keeping this in mind, Dr. Van Mons always gathers his fruit before fully ripe, and allows them to rot before planting the seeds, in order to refine or render less wild and harsh the next generation. In transplanting the young seedlings into quarters to bear, he cuts off the tap root, and he annually shortens the leading and side branches, besides planting them only a few feet apart. All this lessens the vigor of the trees, and produces an impression upon the nature of the seeds which will be produced by their first fruit; and, in order to continue in full force the progressive variation, he allows his seedlings to bear on their own roots.*

Such is Dr. Van Mons' theory and method for obtaining new varieties of fruit. It has never obtained much favour in England, and from the length of time necessary to bring

* "I have found this art to consist in regenerating in a direct line of descent, and as rapidly as possible an improving variety, taking care that there be no interval between the generations. To sow, to re-sow, to sow again, to sow perpetually, in short, to do nothing but sow, is the practice to be pursued, and which cannot be departed from; and in short this is the whole secret of the art I have employed."—Van Mons' *Arbres Fruitiers*, 1. p. 223.

about its results, it is scarcely likely to come into very general use here. At the same time it is not be denied that in his hands it has proved a very successful mode of obtaining new varieties.

It is also undoubtedly true that it is a mode closely founded on natural laws, and that the great bulk of our fine varieties have originated, nominally by chance, but really, by successive reproductions from the seed in our gardens.

It is not a little remarkable that the constant springing up of fine new sorts of fruit in the United States, which is every day growing more frequent, is given with much apparent force as a proof of the accuracy of the Van Mons theory. The first colonists here, who brought with them many seeds gathered from the best old varieties of fruits, were surprised to find their seedlings producing only very inferior fruits. These seedlings had returned by their inherent tendency almost to a wild state. By rearing from them, however, seedlings of many repeated generations, we have arrived at a great number of the finest apples, pears, peaches and plums. According to Dr. Van Mons, had this process been continued *uninterruptedly*, from one generation to the next, a much shorter time would have been necessary for the production of first rate varieties.

To show how the practice of chance sowing works in the other hemisphere, it is stated by one of the most celebrated of the old writers on fruits, Duhamel of France, that he had been in the habit of planting seeds of the finest table pears for fifty years, without ever having produced a good variety. These seeds were from trees of old varieties of fruit.

The American gardener will easily perceive, from what we have stated, a great advantage placed in his hands at the present time for the amelioration of fruits by this system. He will see that, as most of our American varieties of fruit are the result of repeated sowings, more or less constantly repeated, he has before him almost every day a part of the ameliorating process in progress; to which Dr. Van Mons, beginning *de novo*, was obliged to devote his whole life. Nearly all that it is necessary for him to do in attempting to raise a new variety of excellence by this simple mode, is to gather his seeds—before they are fully ripe—from a *seedling* sort of promising quality, though not yet arrived at perfection. The seedling must be quite young—must be on its own root—not grafted;—and it must be a healthy tree, in order to secure a healthy generation of seedlings. Our own experience leads us to believe that he will scarcely have to go beyond one or two generations to obtain fine fruit. These remarks apply to most of our table fruits commonly cultivated. On the other hand, our native grapes, the Isabella, Catawba, &c., which are scarcely removed from the wild state, must by this ameliorating process be carried through several successive generations before we arrive at varieties equalling the finest foreign grapes; a result, which, judging from what we see in progress, we have every reason speedily to hope for.

In order to be most successful in raising new varieties by successive reproduction, let us bear in mind that we must avoid—1st, the seeds of old fruit trees; 2nd, those of grafted fruit trees; and 3rd, that we have the best grounds for good results when we gather our seeds from a young seedling tree, which is itself rather a *perfecting* than a *perfect* fruit.

It is not to be denied that, in the face of Dr. Van Mons' theory, in this country, new varieties of rare excellence are sometimes obtained at once by planting the seeds of old grafted varieties; thus the Lawrence's Favourite, and the Columbia plums, were raised from seeds of the Green Gage, one of the oldest European varieties.

Such are the means of originating new fruits by the Belgian mode. Let us now examine another more direct, more interesting, and more scientific process—cross-breeding; a mode almost universally pursued now by skilful cultivators, in producing new and finer varieties of plants; and which Mr. Knight, the most distinguished horticulturist of the age, so successfully practised on fruit trees.—*The Fruits and Fruit Trees of America.*

To Horsemen.—The New York Sun gives the following instructions in horseback riding: "When a horse runs away with you, have the presence of mind to catch hold of his mane, wind your bridle round his neck and pull upon it; it will have the immediate effect of stopping his career, however headlong it may be. Or if your bridle is not long enough, clasp your arms around his neck, and clinch his windpipe; by doing this you will effectually stop him the moment his respiration is checked. Persons having but a small portion of presence of mind may thus save their own or a fellow-creature's life.

We believe in a clean kitchen, a neat wife in it, a spinning piano, a clean cupboard, a clean dairy, and a clear conscience.

Downing's Book on Fruit Trees, &c.

Some remarks on the new work of A. J. Downing, on the Fruits and Fruit Trees of America, by S. B. Parsons, of the Commercial Garden and Nursery, Flushing, Long Island.

In this excellent work which is at length laid before us, all must acknowledge that the author has performed an important service to the cause of Pomology in this country, in classifying and placing in a tangible and accessible form, the nomenclatures which were formerly scattered throughout various works in Europe and America. With the exception of some few omissions and incorrect descriptions, it seems substantially correct, and its comparative freedom from error in this respect, can be appreciated only by those who know from experience the great difficulty of procuring good specimens of fruit from a distance, and the necessarily great deterioration of flavor in fruit brought from various points between Boston and Cincinnati.

Many, however, of the author's opinions on Vegetable Physiology, and on the cultivation of fruit, will be somewhat questioned, and must be viewed merely as matters of opinion. Of this character are his remarks on the pruning of the foreign grape. On page 221, he says that if the spurring method is practised, the vine will soon bear only mildewed and imperfect fruit, and that the older and larger the vine, the less likely it is to produce a good crop. As I am not aware that the author has fruited the foreign vine himself to any extent, I am disposed to think that his opinions are formed from those of the gardeners of his vicinity, who may have been comparatively successful with the renewal method. Having recently erected some large vineries for the more full testing of all the varieties of the grape, I was very particular during my recent visit to Europe, in making inquiries respecting the most approved method of pruning; and for this purpose visited all the vineries within my reach. I do not recollect an exception to the general reply, that the spurring method was decidedly the best, and produced the largest fruit at an earlier period in the age of the vine. Where the vine is partially cut down every year, as in the renewal method, it becomes weakened and exhausted, and much of that sap which should be devoted to the fruit, is spent upon the formation of new wood for the next year.

Roberts, who is deemed the only really practical writer on the vine, is very decided in his approval of the spurring method. Our own vinery has not been erected a sufficiently long time to enable me to speak from experience. I only give the result of careful inquiry. I am far from wishing to say that the renewal method is decidedly wrong, or that by it good fruit cannot be produced. On the contrary, I know many who succeed comparatively well with this mode. I am only desirous that the author's opinions on this head should not be taken as facts, and that the spur method should not be so unreservedly condemned, when there is such an array of evidence in its favour.

Well adapted as is this work to the wants of the community, it is much to be regretted that our excellent friend the author, has somewhat affected its usefulness in making it by implication a vehicle for the praises of his own very good establishment, and has so nicely adapted his theories to his own soil and climate. I have no objection whatever to the author's being born "in the largest garden," &c., for that may be a matter of opinion; neither do I dislike to see his deep rooted attachment to his own establishment, for this is perfectly natural, and all men have a perfect right not only to think, but to speak as loudly as they incline of those things which they highly value. But at the same time I cannot admit their right to make statements respecting others which are neither consistent with justice, nor in accordance with facts. No one can esteem the author or his useful labours more than ourselves, and we sincerely regret that he has allowed himself to make statements without endeavouring to ascertain their correctness. The statements seem intended to prove the inferiority of the Boston, Long Island, and other seaboard nurseries, to the inland nurseries, among which latter, the Highland Botanic Garden holds a conspicuous place. He first asserts that the soil and climate of the seaboard are bad, and that, in consequence, many fruits have become worthless. That this defect has extended to the young trees in the seaboard nurseries, and that when taken to the interior they carry their degenerate habit with them. He also states that young trees from the inland nurseries succeed much better in the seaboard orchards, and then very skilfully leaves the reader to draw the inference that it is only safe to obtain trees from the inland nurseries, and more particularly of the Highland Botanic Garden. On page 555, he says, "all along the seacoast *where the climate is rude and the soil rather sandy*, as upon Long Island, in New Jersey, near Hartford, and around Boston, many sorts of pears that once flourished well, are now feeble, and the fruit is often blighted."

We do not object to his statement that

our climate is rude, for we have always admitted that the exposed situation of the Long Island and Boston nurseries, rendered the trees grown there very hardy, and peculiarly eligible for removal to any latitude. It is well known that the cold is more intense on the seaboard than in a much higher latitude far from the sea, and that the sudden changes experienced in Boston and Long Island, have a very hardening effect on those trees which survive it. This seems corroborated by a fact stated on page 260, that the black Mulberry thrives well and bears good crops at Hyde Park, on the Hudson, 80 miles north of New York, while it is frequently killed on Long Island; and we have almost abandoned its cultivation. To this part of the author's statement, therefore, we have no objection; but we are much surprised that without proper inquiry, he has stated, that the soil of Boston and of Long Island is "rather sandy." We do not wish to say that he stated what he knew was wrong, but we think that ignorance is much to be regretted in a work where correctness is indispensable.

I cannot speak advisedly of the whole vicinity of Boston, but must leave that to the editors. I am quite decided, however, in the opinion, that the soil in the nurseries of Hovey & Co.,—Winships, Kenrick, and others, is quite far from being sandy. Respecting Long Island, his remarks must be intended not for the south side, but for the rolling country which characterizes all the north side, and where alone nurseries are found, and good fruit to any extent is produced. There, and more particularly in the vicinity of Flushing, exists every variety of soil, excepting sand. The heaviest clay, porous, gravelly soil, and occasionally a spot of sandy loam are found, but the most prevailing is a rich loam. In the land attached to our establishment—about 250 acres—we have a great variety of soil, a portion being gravelly loam, other parts heavy clay, and a large portion of that planted with trees, a rich loam. Although we have abundance of clay soil for all our purposes, we rarely use it, for our own experience strengthens the opinion of others that a clay soil is superior to a loam for no class of trees, and decidedly injurious to many. McIntosh, the best practical writer on the cultivation of fruits, says that peaches and apricots "require a somewhat rich and mellow soil, richer than that for the apple, and much lighter than that for the pear;" that "apples delight in a soft hazel loam, containing a small portion of sand;" that "the cherry delights in a dry, light, and rather sandy soil;" that "plums are found to flourish best in a soil neither too light, nor too heavy and wet;" and that "a dry, deep loam is the best soil for the pear tree, when upon a stock of its own species: a gravelly bottom is good, provided there be sufficient depth of mould over it, and a clayey, wet, spongy bottom is the worst of all." He farther states that climate has much less to do with fruit trees than soil, and that pear trees planted on a lighter soil, are not subject to barrenness. It will, therefore, be seen, that according to this excellent authority, our Boston and Long Island soil in its great variety, is well adapted to all kinds of fruit trees, while a stiff retentive clay is scarcely adapted to any. In corroboration of this, we planted a few years since, a square of young pear trees, where the soil was a very heavy clay, but after two years' trial, found them doing so poorly, and making scarcely any growth, that we transplanted them to a loam, where they are now throwing out fine shoots. One of the largest nurserymen on New York Island, informs us that he finds it exceedingly difficult to raise apples on his soil, which is a stiff, retentive clay. A clay soil is peculiarly injurious to cherries, and for these we never use it. Pears and plums will unquestionably do better than any other fruit on a stiff clay, but our experience is very conclusive to ourselves, that even these succeed far better on a good heavy loam. The author very justly observes on page 326, that trees in a damp soil are much more liable to that serious enemy, the frozen saplight; such being the case, they must peculiarly suffer in a clay soil, which is well known to be very retentive of moisture. It is mentioned, page 62, that R. L. Pell, on the Hudson, has been very successful in the cultivation of apples in a strong, deep, sandy loam, on a gravelly subsoil. A Perdigron plum stands behind my house, which has borne fine fruit abundantly for more than 25 years. I have also Seckel and other pear trees that have borne well for the same length of time. In my own orchard are produced every year as large, fine, and healthy peaches, as in those parts of Delaware, where disease is comparatively unknown. Some of my Crawford's Melocoton measured last year more than nine inches in circumference, and of delicious flavor. Judge Strong, of this place, has peach trees that are, I am informed, at least 20 years old, if not much more, and still produce fine healthy fruit. I am strongly of the opinion that the most suitable soil for all fruit trees, is a good gravelly loam. All fruit trees discharge from the root more or less excrementory matter, which, if accumulated and retained about the roots, is in-

jurious in a great degree. In a retentive clay soil this must inevitably remain, but in a porous, gravelly soil, the rain has free access to the roots, and washes away the injurious matter before it can produce any evil effect. The soil of Dr. Rhinelander, of Huntingdon, L. I., is of this nature, and he is remarkably successful in the cultivation of every variety of fruit. I do not recollect ever to have seen finer peaches, plums, apricots, and nectarines, than I tasted in his grounds the last year.

The author asserts that a large number of pears have deteriorated on the seaboard. I cannot speak of Boston, but as applied to Long Island, those assertions are entirely incorrect. We know of but two varieties of fruit that have at all deteriorated,—the Virgouleuse and St. Germain pears; while we have originated several new varieties, of which the Lawrence pear, a winter fruit, equals the best foreign varieties. This deterioration is, we are satisfied, caused by an insect which attacks the tree in certain localities, but whose ravages are prevented by high cultivation and thinning of fruit, for it is well known that many insects will rarely attack thrifty shoots and fruit, and during a season of rapid vegetation and poor fruit crops, many of our Virgouleuse pears were fine and sound. The same appearance of disease was shown some years since among our Newtown pippins, which the author's brother informed us also appeared among their own. We immediately cultivated and manured the orchard very highly, and the year after were rewarded with perfectly sound apples of unusual size and fine flavor. I have not heard that this appearance of disease has disappeared from the Hudson river, but am convinced that high cultivation would effect that object. As the author observes, every fruit has its locality, and may be often inferior elsewhere, as the peach is attacked by insects and disease in New Jersey, while it is free from them in more Southern States. We think we have satisfactorily shown, however, that these casualties are owing neither to soil nor climate, for we have every variety of the former, and the latter has but little influence. They are owing to some of those inexplicable causes which still puzzle the best vegetable physiologists.

The author goes on to state that on the seaboard pears are propagated on unhealthy stocks. If he had visited our own nursery, or that of Hovey & Co., he would have discovered that healthy imported pear stocks from the wild seed are uniformly used, and that suckers are entirely discarded. They may be also discarded in the interior, but we recollect some two years since seeing some pears on suckers which Hovey & Co. had obtained from an inland nursery, of the appearance of which, we do not wish to speak. Respecting the peach, it is always our custom to obtain the stones from those parts of the South not materially affected by disease, and also to inoculate the peach, apricot, and nectarine, on the healthy stocks of a wild plum, on which they are more hardy and longer lived.

The author also quotes a cultivator from Ohio, to prove that one tree taken from the seacoast soon decayed, while another from the interior, and by implication from the Highland Botanic Garden, preserved its good qualities. We do not wish to call in question any of the author's *facts* unnecessarily, but cannot avoid thinking that if such is the case, it is somewhat singular that nurserymen from Ohio and Kentucky, and some from Orange county, N. Y., men too of knowledge and experience, after examining all the principal inland nurseries, have for years purchased, and continue to purchase, of the Long Island nurseries. I need say but little when knowledge and experience thus manifest their judgment. As all the author's statements are founded upon his estimate of the quality of seaboard soil, which estimate it is in our power to prove totally erroneous, we trust that the error of those statements will be fully manifest. We have stated we possessed every variety of soil; that we know of no pears having the appearance of disease here, excepting the Virgouleuse and St. Germain, our stock of the former of which is only from buds furnished us by the author some yeas since; that the Newtown pippin was sound and good here, which at our latest accounts from Newburgh, was there decaying; and that we inoculate on seedling pear stocks only, and on peaches from comparatively healthy sections.

We have, therefore, as far as Long Island is concerned, stated respectfully but unequivocally, that the author's statements on this head are totally erroneous. While with our high esteem for the author is mingled a feeling of regret that he has impaired the usefulness of his work by employing it indirectly as an advertising medium, a somewhat stronger feeling is excited by his manifest endeavour to convey erroneous impressions respecting other establishments similar to his own. Should the work be so successful as to reach a second edition, we trust that the author's sense of justice will lead him to correct the impression by the only means now in his power.—*Hovey's Magazine of Horticulture.*

The Teeth.

L. M. Child says,—"The prevalence of defective teeth in this country is the general subject of remark by foreigners, and whoever has travelled in Spain or Portugal, is struck with the superior soundness and whiteness of teeth in those countries.

"Nobody need to have an offensive breath. A careful removal of substances from between the teeth, rinsing the mouth after meals, and a bit of charcoal held in the mouth—will always cure a bad breath.

"A lump of charcoal held in the mouth, two or three times a week, slowly chewed, has a wonderful power to preserve the teeth and purify the breath. The action is purely chemical. It counteracts the acid arising from a disordered stomach, or food decaying about the gums; and it is this acid which destroys the teeth.

"A dear friend of ours had, when about 20 years of age, a front tooth that turned black; gradually crumbled; and so broke off piecemeal. By frequently chewing charcoal, the progress of decay was not only arrested; but nature set most vigorously to work to repair the breach; and the crumbled portion grew again, till the whole tooth was sound as before! This I know to be a fact. Every one knows that charcoal is an antiputrescent; and is used in boxing up animal or vegetable substances, to keep them from decay. Upon the same chemical principle, it tends to preserve teeth and to sweeten the breath. There is no danger in swallowing it: on the contrary, small quantities have a healthful effect on the inward system, particularly when the body is suffering from that class of complaints peculiarly incident to summer. It would not be wise to swallow that, or any other gritty substance, in large quantities."

Proposed Tunnel through London.

It is stated Mr. Stephenson has suggested the construction of a tunnel from Hyde-park corner to Mile-end, for the purpose of easing the great leading thoroughfares of their present throng of passengers. From this trunk line communication would be had with the streets above by means of spiral stair-cases, under cover, at regular distances, and branch tunnels would lead off to the various suburbs north of the Thames, Regent's-park, Highgate, Hampstead, Tottenham, &c.; in these tunnels railway omnibuses would run, and a journey from one end of London to the other might be accomplished in half an hour or forty minutes, while the streets above would be considerably cleared, and much of the present confusion prevented. Such a proposal may at first to many persons appear absurd, but the plan is undoubtedly practicable, and though enormously expensive, the nature of the soil—London clay—is favourable, and the great traffic which would arise would probably pay a moderate interest.—*Miners' Rail Road Journal.*

To Scour Clothes, Coats, Pelisses, &c.—If a black, blue, or brown coat, dry two ounces of fullers' earth and pour on it sufficient boiling water to dissolve it, and plaster with it the spots of grease; take a pennyworth of bullock's gall, mix with it half a pint of stale urine and a little boiling water; with a hard brush dipped in this liquor, brush spotted places. Then dip the coat in a bucket of cold spring water. When nearly dry, lay the nap right and pass a drop of oil of olives over the brush to finish it.

If grey, drab, fawns, or maroons, cut yellow soap into thin slices, and pour water upon it to moisten it. Rub the greasy and dirty spots of the coat. Let it dry a little, and then brush it with warm water, repeating, if necessary, as at first, and use water a little hotter: rinse several times in warm water, and finish as before.—*Ex. Paper.*

A Good Cow.

To the Editor of the Maine Farmer:

Sir,—I have a cow from which we made last season, from May 24th to the 1st day of January following, 270 pounds of good butter. The greatest amount per week, was 15¼ pounds. She made this season, in seven days, 16¼ pounds. She has no provender, nor extra feed of any kind; nothing more than common pasture, having been kept with the rest of my stock. She is about one half blooded Durham Short-horn, and is seven years old. Now if any person can produce a better cow, I should like to hear from him.

Joseph S. Atkins.

New Sharon, Aug. 4th, 1845.

Soap-boilers' Ley as Manure.—If, in making soap, wood ashes, lime, and common salt be used, a ley will be obtained containing much chloride of potassium, some gypsum, sulphate of potash, common salt, and three to four per cent. of brownish soap. The soap-boilers let the ley run off as useless. In some soils and for some crops it is a very good manure, as where the soil is deficient in chlorine and potash, and where plants are grown which require a considerable amount of those substances. It is most commonly used for meadows overgrown with moss, and is thought good for rye.—*English Farmers' Journal.*

The Apple.

The apple is the world renowned fruit of temperate climates. From the most remote periods it has been the subject of praise among writers and poets, and the old mythologies all endow its fruit with wonderful virtues. The allegorical tree of knowledge bore apples, and the celebrated golden fruit of the orchards of Hesperus, guarded by the sleepless dragon which it was one of the triumphs of Hercules to slay, were also apples according to the old legends. Among the heathen gods of the north, there were apples said to possess the power of conferring immortality, which were watched over by the goddess Iduna, and kept for the dessert of the gods who felt themselves growing old. As the mistletoe grew chiefly on the apple and the oak, the former was looked upon with great respect by the ancient Druids of Britain, and even to this day in some parts of England, the antique custom of saluting the apple trees in the orchard in the hope of obtaining a good crop the next year, still lingers among the farmers of portions of Devonshire and Hampshire. This odd ceremony consists in saluting the tree with a portion of the contents of a wassail bowl of cider, with a toast in it, by pouring a little of the cider about the roots, and even hanging a bit of the toast on the branches of the most barren, the farmer and his men dancing in a circle round the tree, and singing rude songs like the following:—

"Here's to thee, old apple tree,
Whence thou mayst bud, and whence thou mayst blow,
And whence thou may'st bear apples enow;
Hats full—caps full—
Bushels and sacks full—
Huzza!"

Propagation.—The apple for propagation is usually raised from seeds obtained from the pomace of the cider mills, and a preference is always given to that from thrifty young orchards. These are sown in autumn, in broad drills, in good mellow soil, and they remain in the seed buds, attention being paid to keeping the soil loose and free from weeds, from one to three years, according to the richness of the soil. When the seedlings are a little more than a fourth of an inch in diameter, they should be taken up in the spring or autumn, their tap roots shortened, and then planted in nursery rows, one foot apart and three to four feet between the rows. If the plants are thrifty and the soil good, they may be budded the following autumn, within three or four inches of the ground, and this is the most speedy mode of obtaining strong, straight, thrifty plants. Grafting is generally performed when the stocks are half an inch thick.

Apple trees for transplanting to orchards, should be at least two years budded, and six or seven feet high, and they should have a proper balance of head or side branches.

Soil and situation.—The apple will grow on a great variety of soils, but it seldom thrives on very dry sands, or soils saturated with moisture. Its favourite soil, in all countries, is a strong loam of a calcareous or limestone nature. A deep, strong, gravelly, marley or clayey loam, or a strong sandy loam on a gravelly subsoil, produces the greatest crops, and the highest flavored fruit, as well as the utmost longevity of the trees. Such a soil is moist rather than dry, the most favourable condition for this fruit. Too damp soils may often be rendered fit for the apple by a thorough draining, and too dry ones by deep subsoil ploughing, or trenching, where the subsoil is of a heavier texture. And many apple orchards in New England are very productive and flourishing on soils so stony—though naturally fertile—as to be unfit for any other crop.

As regards site, apple orchards flourish best in southern and middle portions of the country, on north slopes, and often even on the steep north sides of hills where the climate is hot and dry. Farther north a southern or south-eastern aspect is preferable, to ripen the crop and the wood perfectly.

Planting and cultivation of orchards.—With the exception of a few early and very choice sorts in the fruit garden, the orchard is the place for this tree, and indeed when we consider the great value and usefulness of apples, it is easy to see that no farm is complete without a large and well selected orchard.

The distance at which the trees should be planted in an orchard, depends on the mode in which they are to be treated. When it is desired finally to cover and devote the whole of the ground to the trees, 30 feet apart is the proper interval, but where the farmer wishes to keep the land between the trees in grain and grass, 50 feet is not too great a distance in strong soils. Forty feet apart, however, is the usual distance at which the trees are planted in apple orchards.

Before transplanting, the ground should be well prepared for the trees, and vigorous healthy young trees should be selected from the nurseries.

As there is a great difference in the natural growth, shape and size of the various sorts of apple trees, those of the same kind should be put in a row together, or near each other, this will not only facilitate culture and gathering of the fruit, but will add to the orderly appearance of the orchard.

It is an indispensable requisite in all young orchards, to keep the ground mellow and loose by cultivation, at least for the first few years, until the trees are well established. Indeed of two adjoining orchards, one planted and kept in grass, and the other ploughed for the first five years, there will be an incredible difference in favour of the latter.

Not only will these trees show rich, dark, luxuriant foliage, and clean smooth stems, while those neglected will have a starved and sickly look, but the size of the trees in the cultivated orchard will be treble that of the others at the end of that time, and a tree in one will be ready to bear an abundant crop before the other has yielded a peck of good fruit.

Fallow crops are the best for orchards—potatoes, vines, buckwheat, roots, Indian corn, and the like. An occasional crop of grass or grain may be taken, but clover is rather too coarse rooted and exhausting for a young orchard; when this or grass is grown among young trees for a year or two, a circle of two or three feet in diameter should be kept loose by digging every season about the stem of each tree.

When the least symptom of failure or decay in a bearing orchard is perceived, the ground should have a good top-dressing of manure, and of marl or mild lime, in alternate years. It is folly to suppose that so strong growing a tree as the apple, when planted thickly in an orchard, will not after a few heavy crops of fruit, exhaust the soil of much of its proper food. If we wish our trees to continue in a healthy bearing state, we should manure them as regularly as any other crop, and they will amply repay the expense. There is scarcely a farm where the *waste* of barn-yard manure—the urine, etc., if properly economized, by mixing this animal excrement with the muck heap—would not be amply sufficient to keep the orchard in the best condition. And how many moss covered, barren orchards, formerly very productive, do we every day see, which only require a plentiful supply of food in a substantial top-dressing, a thorough scraping of the stems and washing with diluted soft soap, to bring them again into the finest state of vigour and productiveness.

The bearing year of the apple in common culture, only takes place every alternate year, owing to the excessive crops it usually produces, by which they exhaust most of the organizable matter laid up by the tree, which then requires another season to recover, and collect a sufficient supply again to form fruit buds. When half the fruit is thinned out in a young state, leaving only a moderate crop, the apple like other fruit trees will bear every year, as it will also if the soil is kept in high condition. The bearing year of an apple tree, or a whole orchard may be changed by picking off the fruit when the trees first show good crops, allowing it to remain only on the alternate seasons which we wish to make the bearing year.—*Downing's Fruits and Fruit Trees.*

From the American Agriculturist.

Agriculture in Scotland.

FROM Edinburgh to the Fala water, nearly twenty miles, the cultivation is generally good, and about Dalkeith the pasture fields looked remarkably well. But even thus near to the Lothians, there are here and there farms which are almost unimproved, whose fields show the baneful effects of indolence or prejudice. The noble parks about Dalkeith Palace and Newbattle Abbey, contribute greatly to the beauty of this section. From Blackshiels the road rises rapidly to the top of Soutra Hill, one of the highest of the Lammermoors. It is, I believe, about 1,200 feet above the level of the sea. At the top is a wide, bleak, boggy tract, tenanted almost entirely by sheep, nearly all black-faced. A solitary shepherd's hut and ale-house rise alone in the middle, and tall wooden posts by the road-side show that marks are necessary during the winter storms. In this high bleak region we can scarcely hope to grow grain crops in regular rotation, even by the most approved methods now known; but I think that by draining, liming, and judicious plantations to form shelters on the more exposed points, the pasture might be increased in value many fold.

From this place to Lauder, and indeed I may say almost to Kelso, the farming generally is not good. The soil is formed from the slates of the great clay slate formation, which stretches across Scotland from St. Abb's Head to the Mull of Galloway. The different strata of slate differ in composition greatly; but they all form improvable soils. Many, or indeed I may say all, of these soils are rather stiff, naturally cold, and retentive of water. Draining is progressing among the farmers there, but not so fast as it ought; the fields are too often thrown up in ridges, with a fine crop ornamenting in a narrow stripe the top, and contrasting with a yellow dwarfish growth in the hollow. One field struck me particularly. Half of it only, the coachman told me, had been drained. The crop was turnips, sown on ridges across the field, which had a gentle slope. It had been raining violently during the night, and the water stood in pools be-

tween the ridges as far as the undrained land went; beyond that it was dry. I never saw so perfectly exemplified, the effect of thorough draining.

On drawing near to Kelso the aspect of things changes for the better. There are many very excellent farmers in that neighbourhood. We stopped half a day to visit Mr. Dudgeon, of Skylaw. This gentleman is extensively known as a most enterprising farmer. During a former lease many improvements were made, advances, in fact, fully equal to any of the time in that region. Now having a new lease and more light, he is proceeding with great vigor and confidence. The soil is chiefly strong and stiff, some of the clay making excellent tiles. The great evil on such soils is an excess of water; according to the earlier systems of draining it was attempted to remove this by cross drains to *cut off the springs*, but these have been found not to accomplish the object. The whole plan of draining, therefore, is changed, and every field is, or soon will be, drained straight down to the slope, the drains being twelve yards apart, and never less than thirty-six inches in depth. The effect of the drain, followed after a proper time by the subsoil plough, is such, that he is now growing crops of turnips on stiff tile clays. In some of the English counties over which I have lately travelled, Norfolk, for instance, even where the soil is deep, they merely skim the surface, four to five inches being the usual depth, and they call ten inches subsoiling. Mr. Dudgeon does not allow his men to go less than nine inches at the first ploughing, and follows that by subsoiling from six to nine inches farther.

The farm contains about 900 acres, and is laid out in large fields, of 20 to 40 acres. We found nearly all of the crops looking well, the turnips especially so. Of these there are this year 180 acres. In one turnip field I counted 29 hoes in full operation. Most of this company were women, they being generally quicker and more expert than the men. Very few potatoes are grown, merely enough for the family, and a certain portion to each labourer. The wheat looked healthy, but is rather thin in some fields, owing either to frosts in spring or the wire-worm.

We found on one corner of the farm a tile work in full operation. It turns out from 4 to 500,000 tiles in a year, but is not by any means able to supply the demand of the immediate neighbourhood.

At the same time that Mr. Dudgeon is improving most rapidly the long cultivated fields, he is bringing in others from a state of nature. We saw one of about 30 acres, in which the drains are nearly complete. The upper part was a wild moor, overgrown with patches of furze, and the lower part a perfect morass. The soil looked stiff and unpromising; but when once dry and well broken up, it will repay the trouble and expense of subduing it.

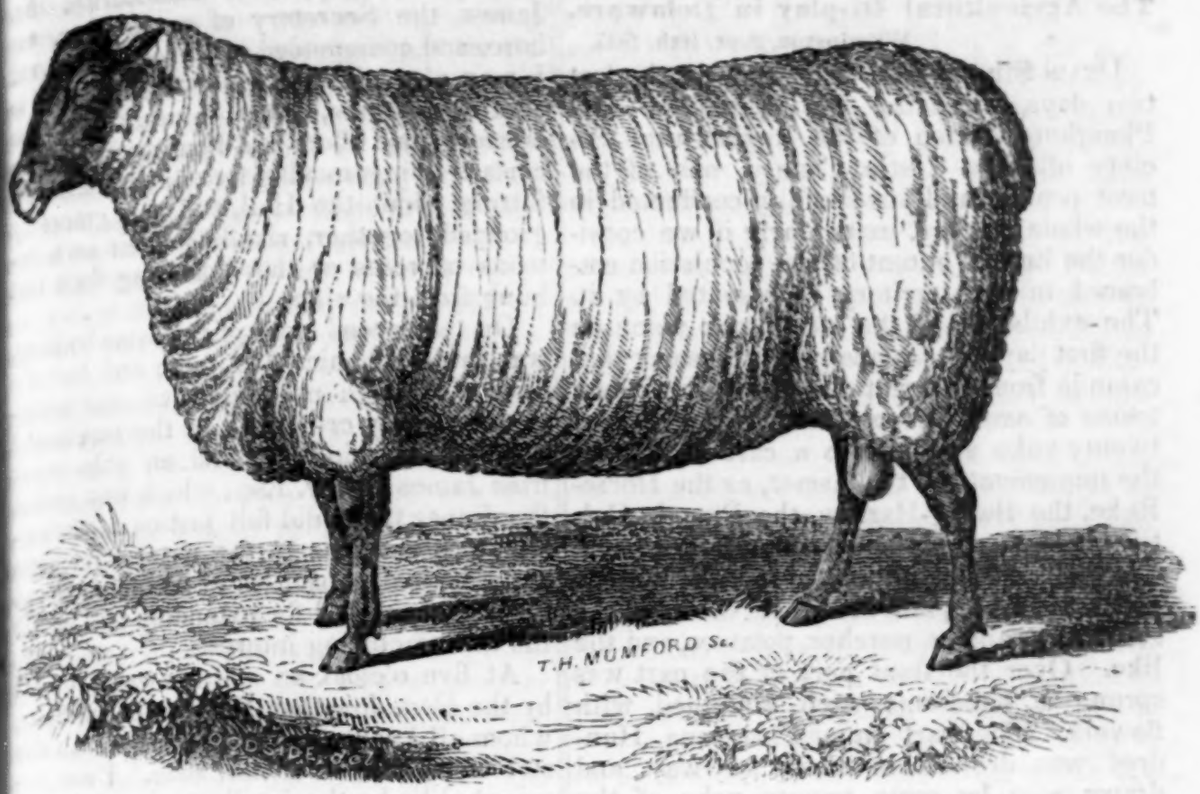
Mr. Dudgeon has had three young Germans with him this summer, studying practical agriculture; one of them is to remain two years. To show the estimation in which Scotch farming is held, I may mention that at the present time no less than thirty young men attend Kelso market weekly, who are students with the farmers of the neighbourhood. They are for the most part from England, some from Ireland, and a number from the continent. There should be some from the United States. A year of such tuition would be quite invaluable to any of our young farmers, and my own experience of Scottish hospitality and kindness would warrant me in promising to any who might incline to try it, a pleasant as well as profitable year. John P. Norton.

Edinburgh, July 11th, 1845.

Busy Bees.—In the Island of Cuba bees are kept with great success. They are not enervated by the warmth and perennial fruitfulness of the climate, but work on accumulating stores, though there is to be no winter in which they will be wanted. Many of the Cubans have hundreds of swarms. All the owners do is, to furnish hives, which only requires them to cut a large hollow tree into pieces three feet long, and laying them under sheds, to fasten a stick through the centre, upon which the bees begin to build. The hives swarm frequently, and all are, as we said, trained to thorough industry, and their industry is abundantly rewarded among the fragrant Belle Flowers. When a hive is full of honey, the bees seal it up at both ends, and go to another; so that the planter has only to take away the rich stores from the deserted dwellings; for as there is no winter the bees are always laying up and never consuming.—*Journal of Commerce.*

When molasses is used in cooking, it is a prodigious improvement to boil and skim it before you use it. It takes out the unpleasant raw taste, and makes it almost as good as sugar.

The way to get credit is to be punctual; the way to preserve it is not to use it much: settle often—have short accounts.



PORTRAIT OF THE SOUTHDOWN BUCK "PRINCE,"

The property of Aaron Clement, Esq., of Philadelphia.

Prince is descended directly from an importation of pure bred Southdowns, made by E. P. Prentice, Esq. He is four years old, and produced at last shearing seven pounds of wool of excellent quality. He is remarkable for his proportions, neatness and beauty of form, as well as his great size, weighing in May last, 230 lbs.

The Southdowns combine the two great qualities most desirable in sheep, viz: wool sufficiently fine for general purposes, and superior mutton.

They are a hardy race of sheep, much disposed to fat, and when fatted, are capable of travelling a reasonable distance to a market. They are admirably suited to the high lands of the Southern States, perhaps more so than any other breed of sheep.

In describing these sheep, Ellman says, as quoted by *Baxter* in his *Library of Agriculture*, "The head should be neither too long nor too short, the lip thin, the neck neither too long nor too short, but thin next the head, and tapering towards the shoulders. Southdown breeders object to a long, thin neck; it denotes delicacy. The breast should be wide and deep, projecting forward before the fore-legs; this indicates a good constitution, and disposition to feed. The shoulders should not be too wide between the plate-bones, but on a level with the chine; if the shoulderblades are wide on the top, the animal generally drops behind the shoulders. The chine should be low and straight from the shoulders to the tail; the ribs should project horizontally from the chine, for the animal will then lay its meat on the prime parts; the sides high and parallel; the rump long and broad; the tail set on high, and nearly on a level with the chine; the hips wide; the ribs circular, and barrel-shaped; the legs neither very long nor very short; the bones moderately fine."

From the Inquirer and Gazette.

The Agricultural Display in Delaware.

Wilmington, Sept. 18th, 1845.

Dear Sir,—I have been here for the last two days, attending the Exhibition and Ploughing Match of the Agricultural Society of New Castle County, one of the most popular and successfully conducted in the whole country, particularly if we consider the limited extent of the population embraced in the territory represented by it. The exhibition of the stock took place on the first day. Accompanying the stock that came in from different directions, were long teams of oxen. New Castle Hundred sent twenty yoke attached to a cart containing the implements of the farmer, as the Horse-Rake, the Swing-Harrow, the Plough, Cultivator, &c., and products of the soil, such as the sheaf of wheat, rye, corn, oats, tobacco plant, and hemp, and the other "fruits of the season," as apples, peaches, potatoes, and the like. Over the front part of the cart was sprung a handsome arch wreathed with flowers. The cart from Christiana Hundred was dressed in a similar way, and drawn also by some twenty yoke of the most beautiful oxen I ever saw, with banners and mottoes attached to their yokes.

The exhibition ground, a beautiful field of some ten acres, in the rear of the town, was *graced* with the choice stock of the county, cattle, horses, hogs and sheep, of all sizes and ages. Major Reybold had present the celebrated Oxfordshire sheep, which his son, Mr. Clayton Reybold, at an expense of some forty guineas a head, has lately brought from Europe. Until I saw these celebrated sheep, which are, I understand, a cross between the Cottswold and Leicesters, I never fully comprehended, or rather apprehended, or *conceived* the extent to which the art of breeding might be carried. The weight of the largest is at the present time 267 pounds, and measures nearly one yard *across the back*. The Major is one of the best and most *efficient* friends the cause of agriculture has, either in Delaware or the Union.

The horticultural department of the Society, the exhibition of which was at the Town Hall, was one of the most interesting points of attraction. The fitting up, &c., was all under the immediate care and superintendence of the ladies, and though assisted by gardeners, we must give credit to their *artist* eyes and hands, that arrange and display everything in the most skilful and tasteful manner. The gardens of John R. Lattimer, Esq., Samuel Canby, Esq., and William C. Boulden, Esq., seem from the labels upon the fruit, flowers, and culinary vegetables in every part of the Hall, to have been put largely under contribution. Mr. James, the Secretary of our Society, was here, and commended it all very highly, and I may also mention, "not being too old to admire pictures," that in addition to the honours done Flora and Pomona, there were certain living, moving forms and graces now flitting about the Hall, and now gracefully grouped together, rivalling their own festoons of roses or the clustering fruit that hung from the vine.

On the second story of the same building, was the Mechanics' Institute; and here the display, though not extensive, was nevertheless highly creditable to the mechanical skill of Wilmington; and an able report from James Canby, Esq., which was read at the dinner table, did full justice to the contributors, and also to the natural resources and physical capacities of Wilmington and its neighbourhood for extending still further the manufacturing interest.

At five o'clock an address was delivered by the Hon. Jonathan Roberts, of our State, whom all know as a veteran farmer, an able statesman and *an honest man*. I was surprised alike by the intellectual and physical effort of this venerable man, now seventy-five years of age. For one hour he held his audience in breathless attention, and though speaking in the open air, and in the most audible voice, seemed not at all oppressed, for when on the completion of the Address, the farmers and others crowded up to the venerable man, and desired introductions, he received them all, and continued to converse as though not at all oppressed or fatigued. The compliment thus expressively conveyed on the part of his audience, must, I think, have been highly gratifying to our respected fellow citizen.

The Ploughing Match took place on the second day, in the country, some two miles from town. As the hour of ten had been appointed for the start, we were early on the ground, and met crowds of all ages and both sexes, hastening forward, in vehicles, on horseback, and on foot, to witness the trial. I never saw anything like the same interest manifested by all classes of the population, to witness a ploughing match, but this is a grain growing district, and they are ploughing nearly half the year, and to excel in it, seems to be regarded as a high merit. The ploughmen, as we approached, were scattered about a twenty acre green sod field, surrounded and followed by groups of their friends, as they continued to practice their teams and regulate the running of their ploughs. Now the call was made to come forward, make their entries, draw for numbers, and take position ready for a start.

Each was permitted to first run out his land, as it had been staked. The ploughs entered —teams, ploughs, ploughmen, and all appointments seemed complete—and ten better looking, well-made yeomen, could not, perhaps, have been found in the county. The chairman of the committee, Mr. John C. Clark, standing out in front of the line, called out—"Ploughmen! are you ready? One, two, three—go." At the word "go," every team went down to its work, and they moved down the plain in a solid column, upturning and inverting the green sod in the most perfect manner—but soon the line was broken by some advancing at a more rapid gait beyond the rest. The efforts now of the ploughman, as with a quick eye and steady arm, he sought to direct his plough with his utmost skill—the interest and anxiety of friends, as on the completion of every furrow, some expression of admiration or hope, or fear, would escape them—the grouping on the back ground, here a weather beaten countenance wrinkled by age; there the hardy yeoman, with his bronzed and honest features; here the rustic beauty, and there the city belle; the rich green landscape, which tended to add so much to the picturesque of the scene; the lofty eminence that commanded the beautiful Delaware, lying 100 feet below it; the beauty of the autumnal day—all tended to render the scene and the occasion one of the most interesting rural sights ever beheld.

The successful competitor was Mr. James N. Cleland, an enterprising young farmer, living in the neighbourhood, who owns in fee simple the broad acres he cultivates, and the civic wreath fairly belongs to him, for it was no ordinary skill that enabled him to succeed against such able competitors. There were three other premiums delivered, one of which went to a young Mr. Sawdon, another to Mr. Carter, and I do not recollect the name of the fourth.

Now followed the second match, being entries for boys under 16 years of age; eight of whom entered. Their performance was indeed surprising. The first premium was won by a lad by the name of Janvier, the son, as I understood, of a poor widow woman; and when asked whether he would have a piece of plate or its value in money, replied he would take the money, "he wanted it for his mother." The second was won by master George Jackson, a *boy ten years old!* (a son of Mr. Bryan Jackson, a large farmer,) and thought small of his age. The clearing up furrow of this lad exceeded any effort I ever saw of the kind by a boy. In addition to the second premium, Mr. Pedder presented to him, through a member of the committee, as coming from the Messrs. Prouty, whose plough he held, a beautiful little watch, with chain, key, &c., and the possession of it seemed to gratify the little fellow much; nor was it scarcely less gratifying, apparently, to the numerous spectators, who all voted him the *General Tom Thumb* of the ploughing ground.

Two o'clock had been appointed for the delivery of a second Address by Doctor Meuse, and we got in town just in time to listen to a very able and scientific discourse from this gentleman, an eminent agriculturist and a man of science, from the eastern shore of Maryland.

At three o'clock, a large party of about one hundred, sat down to a good dinner at Hall's Hotel, Doctor Thomson, the president of the Society, presiding, and James Canby, Esq., acting as vice-president. The worthy president managed with his usual tact to mingle business with pleasure—now reports of committees—now a speech or sentiment from some invited guest, called out by a brief and happy allusion by the president to the agriculture of the State from which the guest came, or to his individual efforts in the cause. Mr. Roberts, of Pennsylvania, Doctor Meuse, Mr. Tilghman, Hornsly and Jackson, of Maryland, Mr. D. Wheeler, of Kent county, Hon. John Wales, Secretary of State, and others, were successively called out in this way. The Governor of the State was present as a member of the Society. Among the invited guests were a large number from New Jersey and Pennsylvania, among them Doctor Keasby, Col. Sinnickson, Hon. Mr. Yorke, Doctor Tuft, Mr. Smith and Mr. Hanna, who were compelled on account of the hour fixed for the starting of the boat, to leave early. Messrs. Clement and Blythe, of our city, left from the same cause, nor could our friend Doctor Emerson, be prevailed on to stay longer than the first day, anxious as our Delaware friends seemed to honour a native of Delaware, and the editor and in good part author of one of the best agricultural books, the Farmer's Encyclopedia, that has been published. But worse than this, letters from several of our fellow citizens, including the venerable Doctor Mease and other members of our Agricultural Society, and from at least two gentlemen of the press, announced that other engagements, &c., prevented their attendance altogether. But as some recompense, one of them sent with a handsome letter a very pretty sentiment:

"Our Land and its Tillers—Nature and her Noblemen."

Yours, &c.,

P.

Prospects of the Crops.

With the exception of a few partial showers in different parts of the country, the weather has continued uninterruptedly fine; harvest operations have consequently been rapidly proceeded with, and in most of the southern counties the bulk of the corn has been carried. In the north of England there is still a considerable quantity of grain abroad; but the lately experienced sunny days have brought the crops forward amazingly, and in situations where a month back it was feared that corn would never arrive at maturity, the sickle has lately been actively employed. On the whole our prospects as to the future have undergone an immense improvement since the 20th of August, but to suppose that the evil effects of a decidedly wet summer have been entirely remedied, would be altogether unreasonable. That a great proportion of the wheat of this year's growth will be of inferior quality and light weight is unquestionable, nor is it possible that the deficiency from the defective state of the ear, so generally complained of, can have been made good; we must, therefore, adhere to the opinion already expressed on former occasions, viz: that besides the falling off in meal in consequence of the want of weight, and otherwise inferior mealing properties of the berry, the acreable produce will be found short of an average. In judging of the probable value of wheat during the ensuing winter, the injury which potatoes have suffered in many of those districts where this article is most extensively grown, must not be overlooked. Until lately the blight, or to whatever else the failure is attributable, was supposed to have extended no further than the south of England and the Channel Islands. Within the last week, however, complaints have reached us from Lincolnshire, Cambridgeshire and Yorkshire, from which it would appear that the extent of the ravages made by the disease is not yet ascertained. Considering how large a portion of the food of all classes consists of potatoes, so extensive a failure must be regarded as a great calamity. Already prices have risen considerably, and it is certain that if the mischief should prove anything like so extensive as it is represented to be, the consumption of bread stuffs must be increased enormously. These considerations lead to the conclusion, that though no material advance may occur in quotations of wheat immediately, the article *must* hereafter rise in value.

In speaking of potatoes, we omitted to mention one important fact, viz: that orders have been received here from Holland and Belgium for the purchase of the article at very high rates, whilst their export has been prohibited by the Government of the last named country. We have heard it reported, on good authority, that a contract has already been closed at Poole, to ship a thousand tons to Holland. The export of agricultural produce from England to the Continent, is certainly a new feature.—*Mark Lane Express.*

For the Farmers' Cabinet.

Joseph Cloud.

It is no less a duty than a high obligation, to pay suitable tribute of respect to the memory of a good and useful citizen. The deceased, whom we now take up the pen to speak of, occupied a high place in the esteem of his fellow men; and was endeared to those who knew him best, by sentiments of pure affection. We speak more particularly at this time of his domestic relations and attachments, for history will record his other qualities and attainments as they deserve. During the latter part of his life he was devoted to the pursuit of agriculture, and demonstrated on his own farm in Chester county, the correctness and importance of his theories, on the science of agriculture, by the superior productiveness of his mode of cultivation, based upon scientific principles. Mr. Cloud's practical suggestions on the subject of chemistry, as applied to agriculture, were not appreciated by farmers generally. He was indeed in advance of the age, and it remains for the next generation to profit by the truths he inculcated from time to time through the *Cabinet* and other useful periodicals. He is now no more, and with the recollection of his personal virtues, he has left behind him other evidences of usefulness to mankind, which will live after him and praise him. It would be consoling to dwell upon acts of kindness and humanity received at his hands, but such things are rewarded in the fulness of the human heart from which they emanated; and public expression of gratitude would only wound the holier satisfaction which is the meed of pure philanthropy, such as characterized many private traits of him who is the object of this humble tribute.

An Old Friend.

Philadelphia, Sept. 19th, 1845.

Dorsetshire possesses a valuable breed of sheep peculiar to itself. The pure breed are entirely white, the face long and broad, with a tuft of wool on the forehead; the shoulders are low but broad, the back straight, the chest deep, the loins broad, the legs rather beyond a moderate length, and the bone small. They are a hardy and useful breed, and the mutton is well flavored.

Ploughing Match of the New Castle County Agricultural Society.

We the undersigned, appointed judges of the Ploughing Match that took place on the 18th instant, on the farm of Mr. Jacob Lyman, near Wilmington, Delaware, Report: That we were deprived of the pleasure of witnessing the match, having been requested to go out of view of the different competitors, so that our decision could not fail but be impartial. The committee when called to view the ground, were struck with admiration at the regularity of the ploughing, and owing to the slight difference in much of it, were at some loss to decide. There were ten competitors, who entered in the following order: Thomas Sawdon, land No. 1; F. Sawdon, land No. 2; David Morgan, land No. 3; James N. Cleland, land No 4; John Bradford, land No. 5; William Banks, land No. 6; Robert Fountain, land No. 7; John Eveson, land No. 8; Charles Carter, land No. 9; and Richard Carter, land No. 10; the committee after viewing the ground carefully, and taking into consideration the unevenness of the different lands, decided that James N. Cleland, who ploughed with J. B. Moore's plough, No. 8, is entitled to the first premium; T. Sawdon, who ploughed land No. 1, with J. B. Moore's plough, No. 8, is entitled to the second premium; Richard Carter, who ploughed land No. 10, Prouty plough, the third premium, and Charles Carter, who ploughed land No. 9, J. B. Moore's plough, is entitled to the fourth premium.

The committee were highly pleased with the boys. There were eight competitors, and nobly did they contend for the prize. They entered as follows: A. Janvier, land No. 1; J. Sawdon, land No. 2; T. Jackson, land No. 3; G. Jackson, land No. 4; J. Bradford, land No. 5; William Quinn, land No. 6; D. Flinn, land No. 7; and J. Young, land No. 8. We are of opinion that A. Janvier is entitled to the first premium, and G. Jackson to the second, who was well rewarded by the liberality of Mr. Prouty, who had provided a handsome silver watch for the winner of the second premium. No doubt the little fellow when he pulls out his watch, years hence, will remember with gratitude, his old friend Prouty, who the committee think deserves the thanks of the Society for his liberality.

D. W. Gemmill,
John Richardson,
George Janvier,
Committee.

September 18th, 1845.

For the Farmers' Cabinet.

Thaer's Principles of Agriculture.—On Manuring the Soil.

Mr. Editor,—As you appear to think Von Thaer may be of use to your readers, I will continue my condensation of his remarks, and go on with the chapter on *Manuring the Soil.* It is very long and very minute in its details, and it will therefore, take both time and labour to make that kind of abstract which will do full justice to the author, and be adapted to the circumstances of our farmers. "Skimming the cream," whether in literature or the dairy, is an operation of some delicacy; the product must be rich that will bear being thinned, and yet leave nourishing aliment. In the last communication, the author had gone through the various manures, their natures, applicability to various soils, &c., each one in course, except night soil. Of this, our farmers, at least many of them, are aware of the great utility; but there is a strong, almost invincible repugnance to its use, which will last perhaps until necessity forces them, as it has done the farmers of Europe, to make use of every material they can get for improving their lands. Our people may now, and for some years to come, let prejudices have full sway. They have vast territories, on which they may light like a flock of birds, take what they want, and be off to some yet more distant region. But this condition of things will not last, and our now wasteful, prodigal, and careless modes of farming, will cease with the growth of our population, and our cultivators be driven, like those of many parts of Europe, to yield a sensitive nicety to a stern necessity. In the neighbourhood of Philadelphia, this material is used largely by the gardeners, but so far as I know, very little of it at all by the farmers; however, its advantages are well known, and Von Thaer offers nothing new upon the subject.

On the important point of storing and preserving the manure; there is no suggestion that is not already known or practised by our best farmers, except one—that the manure should be left in the stable a week or two before being removed to the dung heap. It has by this time gone through a certain stage of fermentation, in which evaporation goes on with the greatest rapidity; but the adopting of this course must be governed by a matter of more importance, that of keeping the stables dry and clean. The manure may be increased in value, but this is all lost by the risk and injury to the health of your stock. The farmer has very little choice as to where he shall deposit his ma-

nure; large pits are inconvenient, both as to the drawing it out, and because the liquid portions arising from the decomposition, are liable to be lost in the removal. Von Thaer thinks the best arrangement is to have the place where the dung is kept, hollowed out and inclined towards the centre, through which an opening is to be made for the escape of its liquid portions. The urine should be incorporated with the dung and litter. There is no doubt that manure should be kept as much as possible from the sun and rain—how this is to be done is rather a question of the farmer's means, than of the propriety of the course. It will be hardly possible for the great majority of the farmers of this country to cover in their manure heaps, or build over their barn-yards—the expense would overbalance the profit. The only plan that it seems possible for them to adopt readily, is that of throwing dirt over the yard, and defending their manure in this way. This, unquestionably, where it is not attended with too much labour, is an excellent plan, and one every farmer should adopt; every method within his reach should be employed to preserve and keep in fine order the material on which all his hopes of profit, and all his success as an agriculturist, depend. Not all, but surely some of us, can go to the trouble of turfing or throwing dirt over our dung-heaps, to absorb the gasses and the moisture during decomposition, or even go as far as they do in Switzerland, where the dung made from straw litter is put in regular heaps, and the outside of the heap is made of the more strawy portions, and folded over so as to shut out all contact with the atmosphere; in dry weather these heaps are watered, or the liquid from the manure thrown over them—the urine is collected separately in a trench dug on purpose, and used by itself. The time when manure should be carted to the field, and in what condition this manure should be, are questions to be decided very much by the experience of the farmer; some prefer the manure to be entirely decomposed, others would have it carted immediately from the stable to the field. On heavy, tenacious soils, there seems little or no doubt that fresh made litter buried in the soil, is better than fermented dung. The ammonia acts on the insoluble mould contained in such soils, and the nutritive portions of the soil are brought into action more readily by this undecomposed manure, than by that which has gone through its several stages of decay. On light soils it is the reverse, they derive no advantage from manure that has not fermented. One precaution appears necessary, as to the time when manure should be put upon the land—it should be removed before fermentation takes place, or after it has subsided; as in either of these conditions nothing is lost by exposure to the air, but while in a high state of fermentation, many of its active and nutritive portions would evaporate. Von Thaer is strongly in favour of a practice not common among us, that of spreading fresh manure on the land and letting it remain till the spring before it is ploughed in. According to his experience, it is not only of the greatest present advantage to the land and to the crop, but all the succeeding crops are very superior to those raised on land where a larger quantity of decomposed manure has been used. He finds it difficult to explain this result, but it would seem in our opinion, to be owing to the juices of the manure being carried into the ground by the melting snows of the winter and the rains of the spring. This plan will only do on level ground; on declivities it would be washed away in heavy rains. The proper quantity of manure for any given quantity of land will depend on the nature of the soil. Cold clay, moist grounds, require heavy manuring, while light porous soils, will bear but light dressing. They require it more frequently, but less at a time. But among other important points in the manuring of land, there is one which appears very simple, but which in reality requires judgment and is of the greatest consequence, that is, the proper distribution of the manure. If not spread equally over the surface, in those parts where too much is thrown, the grain will very probably lodge or be laid, while where it is too thinly disposed, the crop will show it, and not only the present crop, but each succeeding. The hand that is now writing these words, undertook for the first time to spread manure this summer; it appeared a simple process, but after exertions in which he could feel nearly every artery throb, from his head to his feet, he found that it must all be done over again. He learned in this way, that there is in the seemingly coarsest operations of agriculture, an art and mystery that must be acquired by experience and practice.

After going through the solid manures we come to the liquid, as agents in cultivation. Of the utility of these there is but one opinion among the best agriculturists. The only objection there can be to their general adoption, is that they are as yet in this country, among those novelties from which the old fashioned farmer turns with doubt or disbelief. The amount of trouble or expense that it would cause to make all the arrange-

ments necessary for preserving them, is but small, indeed nothing, when the increased fertility of the soil and the increased crop are considered. It may not be convenient to make tanks or reservoirs with cemented floors and walls, but a hole could be dug in or near the barn-yard, into which all the fluid portions of the decomposing manure could be made to flow, and if not too troublesome or expensive, some kind of passage could be made for leading off all the fluid materials from the house into the same receptacle. Our farmers must learn that nothing should be wasted—not one of them can afford to throw away those resources that lie at his hand. It is asking too much from nature, to be kind to the improvident. In England, and several other parts of Europe, where necessity makes them alive to every thing that can be made available in the cultivation of their lands, they are very particular in the preservation of liquid manures. The same judgment must be exercised in their use as in the other manures. On light and porous soils they are of great benefit in giving strength and consistency, but on tenacious, clayey soils, it will be unsafe to give up the use of solid manure—with these the liquid are used with better effect as a top-dressing.

Sheep-folding, as a mode of collecting manure, is another European device to keep their lands in condition. So few persons in the United States have large flocks of this animal, that it cannot be considered as a plan of much importance to our farmers. But as a matter of curiosity, they may know that the ground is ploughed, and then the sheep sometimes in flocks of two thousand or more, are enclosed by a movable hurdle fence, within a given space. They stay there during the night only, and in the day are sent forth to feed. The next night they are put on a new portion of ground, and so on, till the whole field to be manured is gone over. On a small scale many of our farmers might do the same thing, by having a fence made with wheels, that could be drawn from one field to another. It would be a mode of preserving the manure and turning it to an immediate advantage, that may in some circumstances be worth while.

But besides the excrements of animals, of whose utility there is no doubt, the animal itself may be made to play its part in the art of cultivation. Instead of the bodies of our various animals when they die, being buried, and serving no purpose whatever, they may, by being covered with quick lime and earth, and after they have gone through the most offensive part of the process of putrefaction, be turned to an extremely active manure, and their bones softened by quick lime and pulverized, are equally efficacious. Horn is a still stronger manure than bones, but should only be used for such crops as do not suffer from an excess of manure; and indeed, all parts that we now reject, hair, blood, &c., are all highly nutritive.

A. L. Elwyn.

Note.—As to the remark of fresh manure being put on in the autumn and allowed to remain till spring, one of my neighbours seven or eight years ago, did this accidentally on a field, where now the effect is easily seen and contrasts with the rest of the pasture. The strong effect noticed, is no doubt from the slight evaporation during winter, and from the stronger parts of the manure being carried into the ground by snow and rain.

At Home! Sweet Home!

From "Songs in the Night"—a beautiful volume of Sacred Poetry, recently published in Boston.

Where burns the fireside brightest,
Cheering the social breast?
Where beats the fond heart lightest,
Its humble hopes possessed?
Where is the hour of sadness
With meek-eyed patience borne?
Worth more than those of gladness,
Which mirth's gay cheeks adorn!
Pleasure is marked with fleetness
To those who ever roam,
While grief itself hath sweetness
At home—sweet home!

There blend the ties that strengthen
Our hearts in hours of grief—
The silver links that lengthen
Joy's visits when most brief;
There, eyes in all their splendor,
Are vocal to the heart,
And glances, bright and tender,
Fresh eloquence impart;
Then, dost thou sigh for pleasure?
Oh do not widely roam,
But seek that hidden treasure
At home—sweet home.

Does pure religion charm thee,
Far more than aught below?
Would'st thou that she should arm thee
Against the hour of wo?
Her dwelling is not only
In temples built for prayer,
For home itself is lonely,
Unless her smiles be there;
Wherever we may wander,
'Tis all in vain we roam,
If worshipless her altar
At home—sweet home!

For the Farmers' Cabinet.

Fungi, Insects, &c.,—how to prevent their attacks on plants.

Mr. Editor,—The fact that the disease which has injured the potatoe crop so severely for several years past, has been attributed to the attacks of the fungi, by some highly scientific gentlemen, induces me to give you a few remarks on the *cause of the fungi.*

Close observation will show that all plants of the fungi tribe grow where there is a deficiency of alkalies. We never see mushrooms, toadstools, or anything of the kind grow on or near a heap of ashes, or lime. But we almost invariably see them growing on or near a pile of stable dung, or any thing yielding a large proportion of carbonic acid. The cause of this is easily demonstrated by chemistry. A chemical analysis of plants of the fungi tribe, will show that they contain an extremely small proportion of alkali, far smaller than any other class of vegetables. This fact is of the highest importance to farmers; by its aid they can always tell when their soils need alkaline substances to make them more productive, without going to the trouble and expense of a chemical analysis of the soil for that purpose. Upon whatever spot of ground the fungi make their appearance, *there* is a want of alkali, and no time should be lost in supplying it, if we would raise profitable crops; for such crops as wheat, corn, oats, hay, potatoes, &c., will not grow well there even if they are supplied with the very best stable manure. They need ashes, lime, &c., in such places, *and they cannot do without them.*

The fungi being composed principally of carbon, oxygen, and hydrogen, feed upon carbonic acid and water chiefly, and consequently if lime or potash be added to the soil where they grow, and the carbonic acid be thereby changed into a salt, the fungi have nothing to feed upon, and therefore die, for they cannot feed upon a salt. When the potatoe crop has been furnished with sufficient alkali, particularly potash, and the carbonic acid in it is in the form of a carbonate, the fungi have nothing to feed on, and do not attack the potatoe. On the other hand, when there is *not* sufficient alkali given to the potatoe crop to cause the carbonic acid to form a salt by union with such alkali, then the carbonic acid in the potatoe is in its own form of carbonic acid, and as such the sickly root offers the proper food to the fungi, and it avails itself of it; unfortunately, for doing so, it brings down upon itself the charge of being the cause of the potatoe disease.*

The same is the case with other plants. If they lack alkali to form a salt in connection with the carbonic acid they receive, the superabundant carbonic acid will give nutrition to the seeds of fungi, and they will sprout and grow. We see this effect produced in wheat in the case of mildew, rust, or blight, and also in smut in the same plant, the ergot in rye, the "devil's snuff-box" in corn, the mildew in oats, buckwheat, and the grasses, and the mossy growth on the bark of fruit and other trees. This is demonstrated by the fact, that if we apply strong alkalies in sufficient quantities to any of these plants before they are attacked by the fungi, *they will not be attacked;* and if we supply them after they are attacked, *they will soon be freed from them.* It is to this purpose that our most successful farmers and fruit raisers apply salt and lime to protect wheat from rust, mildew, or blight, and smut—and put ashes and lime upon corn to protect it from the "snuff-box"—and sow ashes on potatoes to save them from the rot—and wash fruit trees with whale oil, soap or other alkaline substances, to restore them to health. These alkaline substances, too, by uniting with the carbonic acid, prevent the commencement of decay. This commencement, in all carboniferous substances, is called in chemistry, the "saccharine fermentation," the product of which is a sweet substance, which gives food to flies, bugs, &c., and which flies and bugs are also charged by other scientific gentlemen, with being the cause of the potatoe rot, and other diseases of plants. The Hessian fly, in my opinion, finds nothing suited to its palate in a healthy stalk of wheat, or one that has enough alkali, and therefore does not attack it; but in a sickly plant, or one with a deficiency of alkali, she finds the sweet substance upon which she feeds, and there lays her eggs; which eggs, in the course of time, hatch and produce worms, and if the plant is in such a condition as to furnish food for these worms, they will still remain there; but a healthy plant will not furnish that food—the same in regard to the wheat-

* Some of the practical chemists of your city, with their balances, tests, &c., might do the agricultural community a great service in connection with this matter, by analyzing sound potatoes, and giving their constituents, and then analyzing the rotting potatoes, and giving their constituents also. The public might then compare them, and see what was wanted, and supply it: I would do so myself, had I the requisite materials.

worm, muck-worm, and all other worms that attack plants. I am led to this conclusion, Mr. Editor, by numerous observations and some experiments. I have found that where there was the proper quantity of alkaline substances plants were not injured by worms, bugs, or flies, in any other way than by being eaten up by them. And, indeed, they are not so apt to be eaten when they have a sufficiency of alkalies, for by their aid they form carbonate of lime, phosphate of lime, silicate of potash, &c., and make their stalks and leaves so hard and strong as to be almost impenetrable to the attacks of many insects that infest them. And their juices are so insipid that they are not so well relished by such insects.

Hoping, Mr. Editor, that my poor labours may be of some service to my fellow men, I take leave of you for the present. If my services are acceptable, perhaps I may have occasion often to write an article for your paper.

Yours, &c.,

CHEMICO.

Wilkesbarre, Pa., October 4th, 1845.

Rotation of Crops.

We take the following extract from Petzholdt's Agricultural Chemistry, as we find it published in the second number of the Farmers' Library. If this work, now publishing by Greeley and McElrath, of New York, and edited by J. S. Skinner, does not succeed, it will not be for lack of valuable matter, both original and selected.—ED.

THE practice of rotation of crops, has arisen out of pure experience. The practical farmer observed that, in most cases, when the same plant was grown for two, three, or more years consecutively upon the same soil, it did not yield the same abundant harvest; whilst, when another crop was tried upon that soil, the production was satisfactory. Observation and experience subsequently and gradually established for different parts a different alternation of crops, but the practical agriculturist has never been able to devise a fixed rule for every kind of soil; although many efforts have been made to attain this desirable end, the subject has not been able to pass the limit of mere empiricism.

While the practical farmer was content to rest simply upon the facts supplied by his experience, and remained satisfied with believing that some plants exhaust the soil, while others do not, the theorist endeavoured to discover a key to this remarkable phenomenon. Of all the hypotheses devised to explain it, that of secretion and excretion by the roots of plants, seems to have had the greatest number of adherents, because it appears to explain satisfactorily the necessity for the rotation of crops.

According to this hypothesis, all plants secrete or form certain matters during vegetation, which they cast out by their roots, and the accumulation of these in the soil exercises an injurious influence upon future crops of the same plants, but does not interfere with the growth of a different crop; nay, it was further supposed that the excrements of one species of plants might furnish an appropriate nourishment for another species. The framers of this hypothesis, no doubt, imagined that plants in this respect exhibited an analogy with animals, because we see animals turn with aversion from the excrements of their own species, whilst the same excrements are sought and eagerly devoured by animals of a different species. But this supposed analogy is utterly fallacious; and if we examine the adaptation of the hypothesis to the facts of the rotation of crops, we shall find it to be altogether unsatisfactory.

The experiments made to prove that certain matters are secreted by the roots of plants, are by no means conclusive; but, since it is well established that plants possess the power of absorbing and adapting matter for their growth, we may also suppose, in the absence of direct proofs, that they likewise secrete matter by their roots. For brevity's sake, we will admit that such secretion takes place, and enquire into the proofs adduced to render the opinion probable, that these secretions exercise an injurious influence upon the growth of plants of the same species, whilst the same matter favours, or, at least, does not exert any injurious effect upon the growth and development of plants belonging to other species.

The facts brought forward to establish this theory are such as these—1st. That fruit trees, planted on the same spot where previously others of the same species had long grown, have not produced so well as usual. 2nd. The camomile—*matricaria chamomilla*—when, to a certain extent, present in a field, interferes with the growth of the cereals, owing, as it is supposed, to its secretions in the soil being offensive to the latter. 3rd. After the culture of peas, vetches, clover, buckwheat, &c., far finer crops of cereals will be produced than if consecutive crops of grain were attempted.

But, in objection to the theory of the excretions of one plant being injurious to another, we might allege, that it often happens that trees of the same kind will flourish upon spots where they have previously grown; and that in many countries, espe-

cially in Hungary, successive crops of grain plants may be grown year after year continually, on the same soil, without disadvantage. In meadows and forests, also, we see the same species of plants succeed each other for ages, and suffer no injury from the accumulation of the secretions of preceding generations. To explain such cases as these would require a new theory to be added to the first, and without the aid of chemistry, this would be as weak and unsatisfactory as we have shown the former theory to be. We must, therefore, reject the hypothesis of the secretions of plants being the cause of the advantage or necessity of the rotation of crops, and endeavour to discover another, capable of affording a satisfactory explanation of the known facts, perfectly consistent with true science, and especially with chemistry; and if such a theory be thus established, it cannot fail to be of great use in practice.

If we assume that the cause of the utility of the rotation of crops depends exclusively upon the circumstance that cultivated plants withdraw from the soil unequal amounts of certain ingredients for their nutrition, all the observed facts are at once and satisfactorily explained, and the possibility of determining the rotation of crops, or of avoiding it altogether, if desirable, rendered evident.

I need not here repeat what I have already told you, respecting those constituents of plants which they derive from the soil, but I must remind you that plants of various species differ very much with respect to the nature as well as to the quantity of mineral or saline constituents which they require for their growth and developement.

Bearing this in mind, it is obvious that the growth of a plant may be impeded, simply because the mineral constituents principally needed, indeed essential to their proper developement, have already been drawn from the soil by the previous cultivation of another plant, requiring nearly or altogether the same constituents. If, for example, we take a field the soil of which contains the mineral and saline materials required to produce wheat, and yet only in a quantity exactly sufficient to produce a single crop, it follows, of course, that a second crop of wheat cannot be reared upon the same field. The soil is completely exhausted for the moment, and will remain so for ever, if it does not contain substances which may by disintegration and decomposition furnish a new supply of the ingredients necessary to the growth of plants, or if these essential matters are not artificially supplied.

Such a complete exhaustion of the soil as we have supposed, for the sake of illustration, to be effected by a single crop, is not very likely ever to happen in fact. But what really happens, and that commonly enough, is, that although all the salts are not exhausted, yet being present in the soil in relative proportions very different to the amounts required by various plants, a single crop of wheat may deprive the soil so completely of one of its mineral constituents, that another crop of wheat would not grow upon it, and yet this soil may still contain abundant mineral constituents for the production of a good crop of clover or turnips.

It will now be obvious that it is possible to grow three, four, or more successive crops of the same grain upon the same fields, whenever the soil contains a sufficient amount of the necessary mineral constituents, and that if a soil possessed an illimitable amount of these substances, or received a constant and sufficient supply of them, it would be able to produce successive crops of the same cereals continually and for ever, and moreover that a rotation of crops would be in such cases wholly unnecessary.

What we have stated with respect to the cereals, applies equally to all other cultivated plants; so that any plant may be grown upon the same field continually, and good crops obtained, if the ingredients of the soil which the plant requires either are present originally to an unlimited amount, or the farmer furnishes the field with a constant and sufficient supply of these substances.

Viewed in this light, the subject will be clearer to you than perhaps has hitherto been the case. You will now understand that an *exhausting plant* must be one which in comparison with other cultivated plants requires many inorganic constituents, and consequently requires for its successful cultivation a soil rich in those constituents. We need by no means wait for the perfect developement of a plant, and subsequent trials upon the same soil where it is grown, in order to know whether it is an exhausting plant or not; we can arrive at a positive conclusion upon this point immediately by burning the plant and examining the ashes. The case for example may occur that some hitherto unknown plant is recommended for cultivation, and tried in a soil equally unknown, as to its amount of the constituents which that particular plant may require.

Practical experience, arising from the growth of this plant in one field or soil, may pronounce it to belong to the class of *exhausting* plants, whilst in another soil it may be found to be a non-exhausting crop. Thus, the most contradictory conclusions may be drawn from practical experience,

and many a farmer has paid the penalty of this uncertainty. It is frequently only after the lapse of a long time, and after a series of successful and unsuccessful trials, that it is at last found out which soil will suit this particular plant and which will not. All this may be obviated, and the question determined at once, by burning the plant, examining its ashes, and carefully analyzing the soil; this will enable us to determine whether a given field will repay the cultivation of the plant or not.

Thus you perceive that the terms, "exhausting" or "non-exhausting plants," are merely relative; a chemical analysis of the ashes of plants, as well as of the soil, can alone enable us to decide upon this point. Strictly speaking, only those plants can be called exhausting which find an insufficient amount of ingredients necessary to their growth present in the soil. So that plants requiring a considerable amount of mineral constituents, such as wheat, for instance, when grown in a soil rich in those constituents, cannot be designated an exhausting crop relatively to the soil; whilst on the other hand, plants requiring but an inconsiderable amount of mineral ingredients, when sown in a soil not adequate to supply even a small amount of these ingredients, must relatively be considered exhausting plants. From the preceding remarks it will be evident how ill-founded the assertion is, that certain plants improve the soil by enriching it. It is a fact, proved beyond the power of controversy, that all plants whatever, withdraw certain mineral constituents from the soil, and thus so far impoverish it. All such notions of improvement, founded upon practical experience, are mere illusions.

It is frequently asserted that fallow crops, such as clover, peas, vetches, lucerne, buckwheat, &c., and even tobacco, potatoes, beet root, carrots, &c., do not exhaust the soil, but on the contrary are, in a certain measure, capable of improving it. This is especially said to be the case with buckwheat, which is frequently sown during fallow, and subsequently, when nearly in flower, ploughed into the soil in order to improve and enrich it. The power of the soil to produce cereals, after having grown crops of these plants, is thought to prove their non-exhausting nature. The term *fallow crops*, indeed, indicates that fields left fallow in order to restore their fertility for the cereals, have been found by experience to be capable of yielding crops of these plants without their subsequent ability to grow the cereals, being affected.

From the New York Farmer and Mechanic.

Sowing Wheat.

New York, Sept. 2nd, 1845.

H. Meigs, Esq., Sec. N. Y. Farmers' Club:

My dear friend—Being engaged to attend the meeting called for this day, in the town of Greenburg, to form a "Farmers' Club" in that town, in accordance with the constitution and by-laws of the Society of Agriculture and Horticulture, of Westchester county, I shall not be able to attend the discussions at the New York Farmers' Club, on the subjects proposed at the last meeting—"The preparation of the ground and the seed for the wheat crop," &c. The wheat crop is so valuable, so intimately connected with the prosperity of not only the agricultural but also the manufacturing, mechanical, and commercial interests of the whole country, that we cannot be too well informed on the subject. Land that has been well manured in a previously cultivated crop, such as corn and potatoes, is, with proper ploughing and harrowing, very suitable for winter wheat. It is always best that the manure should have been applied in the previous crop, particularly if it is rank or recently formed, or your wheat will produce too much straw, be weak, and fall down. There are a few exceptions to this rule. Bone dust, oily fish, street manure, &c., have often been applied at the time of sowing, to secure a good crop. A sandy loam, with a good supply of calcareous earth or lime, forms the best soil for wheat—a certain amount of sand or silex, clay, and lime, being essential to secure a good crop. When I say that the land should be thoroughly ploughed three or four times, and harrowed as often, I am fully aware what is the usual practice, and also of the loss sustained by only one ploughing and two harrowings. I do not apply these observations to land just cleared from the forest (though then, the more and better the ploughing, the larger the crop) or the prairie sod just turned over; but to the land in all the old States, and all lands long under cultivation. The object in ploughing the ground so much, is to turn under more completely atmospheric air, which consists of nitrogen, oxygen, and carbonic acid, a thorough mechanical mixture of which with the soil will insure a great increase of crop; it also acts as a manure. The thorough pulverizing of the soil, so as to make it fine, is secured in this way, which renders it so much better for the fine roots, in the early growth of the plants, to get well rooted before winter sets in, thus securing is from being winter killed. This also enablee you to pasture your sheep and young cattlt

upon it in the fore part of November, without any fear of pulling it up. They will secure it from the Hessian Fly by eating off the larva.

It is also very important to prepare the seed properly; you should have the most plump and clean seed that can be obtained. Six shillings or a dollar more per bushel for the best of seed, are no consideration when the advantages are taken in the account. In a barrel or half hogshead make a brine that will bear an egg, from the old salt taken from your meat and fish casks; or, if you have not saved this, ordinary fine or coarse salt, the former dissolving much the soonest, and is generally preferred for that reason. Put in one, two, or three bushels of wheat, and mix well with the brine, and skim off all the chess and other foul seed and light wheat that rises to the top. There should be brine enough to cover the wheat three inches deep. Stir up the wheat with a stick occasionally, and let it remain in the brine three or four hours. Some persons let it remain all night, but I think there is some danger of swelling the grain and acting upon the farina too much, by leaving it so long in the brine, and there is no real necessity for it. Draw off the brine into another cask, and lay the wheat on an oblique surface, so that the brine may run off; then to every bushel of wheat add three or four quarts of fine air-slacked lime, and rake and shovel it through every part, so that every grain is coated with the lime, and the seed as much separated as possible from each other. Some good farmers use more lime than the above. If you have not lime, and cannot readily obtain it, use unleached wood ashes instead. You must measure your wheat before you prepare it, or you will likely, when you sow it, put less seed in than is proper. You will also find it difficult, from the increased bulk, to hold enough each time in the hand. It is therefore better to sow twice, and at right angles; that is, take rather less than usual in the hand, and when you have gone over the field, begin and sow it over again in due proportion across the first sowing. You will thus have it more even, and secure sufficient seed, which is rarely the case. When you have taken pains to prepare your land well, use plenty of good seed—a virtue rarely practiced in this part of the world. The object gained by the above preparation of the seed is, first, you destroy all the smut, which is a parasitical plant placed on the furzy end of the grain; also all the eggs of insects, that frequently may be seen with a glass on the same part of the grain. The salt and lime also act as a manure to stimulate the germ of the young plant, so as greatly to invigorate it in the early stage of its growth.

Yours, truly,
R. T. Underhill, M. D.

The Galway Fair.

A very large fair is held at Galway, Ireland, in the county of Galway, called the Fair of Rose Mount, at which I was present. This was chiefly for the sale of ponies, or horses of a small breed, with some few cattle. On this occasion, the collection of people was surprisingly great; and I could then well understand what was intended by the public meetings in Ireland, called "monster meetings," in respect to which, until I saw this collection of people, I had always supposed the account of the numbers assembled had been much exaggerated. There were here, on this occasion, some cattle and sheep; but there were, also, four thousand ponies, the catching of which, for examination or sale, as they had, in general, neither bridle nor halter, was sufficiently amusing, and I was about to add, sufficiently Irish. The fair was held on the sea-shore, where the receding tide left a large bed of mud. The ponies, when required to be caught, were surrounded and driven into this mud; and here, in a very ignoble way, they were secured, though it was not always without some difficulty they were extracted after being caught.

1. *Temperance in Ireland.*—There were two circumstances connected with this fair at Rose Mount, a reference to which, though not having an immediate connection with the principal object of my Reports, yet having a direct bearing upon rural manners and customs, may not be considered wholly out of place. Here, as well as at the fair at Donnybrook, where immense numbers of people were congregated, I could observe most distinctly the beneficent effects of that powerful reformatory movement, which, under the ministry of a good man, worthy of the name of an apostle, has effected a glorious moral triumph throughout Ireland, such as the pages of history scarcely record. I cannot say that at either place there was no drinking and no quarrelling; but there was comparatively little; and knowing, from report and from the natural excitableness of the Irish temper, what had been usual on such occasions, I could not but feel how much had been accomplished, when a foreigner might truly say, of such vast and mixed assemblages, they were quiet, orderly, and kind; and a well-behaved man, disposed to keep his elbows to his own sides, might feel an almost equal security as he would feel in church.

2. *The Galway Women.*—There was an-

other circumstance, perfectly unique in its character, to which I shall be pardoned for alluding. There was another species of live stock exhibited at the fair, which I cannot say is never seen at such places, but which does not always present itself under the same frank circumstances. The kind nobleman who accompanied me, and who, like many others, noble and simple, whom it has been my good fortune to meet with on this side of the water, left no effort unessayed for my gratification, after looking at the various objects of the fair, asked me, at last, "if I would like to see the girls." I confess my natural diffidence at once took the alarm; and my imagination cast a few furtive glances over the sea at some precious objects I had left behind. However, upon a voyage of curiosity, why should I not see what was to be seen? and, confident that my good friend could have no sinister design, I gave him an affirmative reply. Upon inquiring of one of the trustees, or masters of the fair, "if the girls had come," we were informed they would be there at twelve o'clock. At twelve o'clock we went, as directed, to a part of the ground higher than the rest of the field, where we found from sixty to a hundred young women, well dressed, with good looks and good manners, and presenting a spectacle quite worth any civil man's looking at, and in which, I can assure my readers, there was nothing to offend any civil or modest man's feelings. These were the marriageable girls of the country, who had come to show themselves on the occasion, to the young men and others who wanted wives; and this was the plain and simple custom of the fair. I am free to say that I saw in the custom no very great impropriety. It certainly did not imply that, though they were ready to be had, any body could have them. It was not a Circassian slave-market, where the richest purchaser could make his selection. They were in no sense of the term on sale; nor did they abandon their own right of choice; but that which is done constantly in more refined society, under various covers and pretences,—at theatres, balls, and public exhibitions; I will say nothing about churches,—was done by these humble and unpretending people in this straightforward manner. Between the noble duchess, who presents a long train of daughters, rustling in silk, and glittering with diamonds, at the queen's drawing-room, or the ladies of rank and fashion, who appear at public places with all the beauty and splendor of dress and ornament which wealth, and taste, and art, and skill, can supply, meaning nothing else but "Admire me!" and these honest Galway nymphs with their fair complexions and their bright eyes, with their white frilled caps, and their red cloaks and petticoats,—for this is the picturesque costume of that part of the country,—all willing to endow some good man with the richest of all the gifts of Heaven, a good and faithful wife, I can see no essential difference.

> "Let not ambition mock their useful toil,
> Their homely joys, and destiny obscure."

I hope I shall be excused, if I say something more of these Galway women. I never saw a more handsome race of people. I have always been a great admirer of beauty; natural beauty, personal beauty, mental beauty, moral beauty. For what did the Creator make things so beautiful as they are made, but to be admired? For what has he endowed man with an exquisite sense of beauty, but that he may cultivate it, and find in it a source of pleasure and delight? As I have grown older, this sense of beauty—and I deem it a great blessing from Heaven—has become more acute; and every day of my life, the world and nature, nature and art, the animal, the vegetable, and the mineral creation, the heavens and the earth, the fields and flowers, men, women, and children, wit, genius, learning, moral purity and moral loveliness, deeds of humanity, fortitude, patience, heroism, disinterestedness, have seemed to me continually more and more beautiful, as, at the setting of the sun, man looks out upon a world made richer and more glorious by his lingering radiance, and skies lit up with an unwonted gorgeousness and splendor. But the human countenance seems in many cases to concentrate all of physical, of intellectual, and of moral beauty, which can be combined in one bright point. Why should it not, therefore, be admired? In the commingled beams of kindness and good humor brightening up the whole face, like heat-lightning in summer on the western sky; or in the flashes of genius sparkling in the eyes with a splendor which the fires of no diamond can rival; or in the whole soul of intelligence, and noble thoughts, and heroic resolution, and strong and lofty passions glowing in the countenance,—there is a manifestation of creative power, of divine skill, unrivalled in any spot or portion of the works of God.

The extraordinary personal beauty of these Galway women was not mere imagination on my part, nor the result of any undue susceptibility. I said to the coachman, as we passed through this part of the country, that I never saw a handsomer people. "That," said he, "travellers always remark," and when I left the country, in casting my eye

over a recent book of Travels in Ireland, I found the author's impressions correspond with my own. Tradition says that a colony of Milesians formerly settled in this part of the country, and that the remains of this race, or the offspring of the intermixture of them with the native tribes, present these results. This is a remarkable fact, and not without its bearing upon one great branch of agricultural improvement.—*Coleman's Agricultural Tour, No. 4.*

French Agriculture.—The French commission on irrigation states the following facts as to the present condition of several branches of agriculture in France. 1st. The supply of cattle is so deficient that animals and animal food of the value of ninety-four millions of francs are imported yearly. 2nd. Fifteen thousand foreign horses are required every year to supply the demand for horses for war and industry. 3rd. The ploughed land in France is to the grass land as six and a half to one, whilst in most of the neighbouring countries it is only as three to one, and in England and Holland two to one; and 4th, there are means of forming not less than two millions of hectares of artificial irrigated meadows in France, which would produce a revenue of about eight millions sterling.—*New Farmers' Journal.*

The Potatoe Rot, which for two or three years has been so destructive in the middle States, and last year in Massachusetts, and to some extent in New Hampshire and Maine, appears to spread this year over all New England, Nova Scotia and New Brunswick. Some few locations may escape with little damage, but the destruction is very widely spread. In Somerset and Franklin, thousands of acres have been planted in potatoes for the starch factories.—*Kennebec Journal.*

Boiled Corn.—A writer in the Indiana Farmer says, the way to prepare corn for the table, is not to put it into a pot and boil it for an hour, or rather until it is good for nothing, but simply to put on your water, and when it boils, put in your corn with a little salt—cover it up tight, and let it boil five minutes, or until the cob is *heated through;* then the corn is done, and you have all the sweet and nutritious qualities without any of its injurious effects.

The British government has appointed Professors Farrady and Playfair, says the Rail-way Express, to ascertain how far it is possible to consume the smoke from steam engine chimneys.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Tenth Month, 1845.

The continued abstract on Manures from Von Thaer, furnished by Dr. Elwyn, and which we give this month, will be found to contain a number of very valuable hints to our practical farmers. "It is too much to ask from nature, that she should be kind to the improvident." Why not preserve what we have at our hand?—why submit to the necessity and inconvenience of going many miles to our cities to purchase so much of foreign manures, when from the cow-yards of many farmers, hogsheads and hogsheads of the very essence of those yards, are suffered to run into ditches and ravines, where they are totally lost! It is strange that we should so willingly, and yet so inconveniently, go many miles to *buy* that, of which we suffer so much to run to waste at our elbow.

The leading article from J. G., on the great Cattle Show, &c., at Utica, will, we are aware, speak for itself, as it will be read with lively interest by every one who takes up the Cabinet; yet we cannot refrain from saying, that the energy and enthusiasm which run through it, deserve to be more broadly diffused among us. They are delightful, and should help to rouse us up to the more complete developement of our own great resources.

THE AMERICAN SHEPHERD: *being a History of the Sheep, with their Breeds, Management and Diseases, illustrated with portraits of different breeds, sheep-barns, sheds, &c. With an Appendix embracing upwards of twenty letters from eminent wool-growers and sheep-fatteners of different States, detailing their respective modes of management;* by L. A. Morrell, *of Lake Ridge, New York.*

This work has been recently published by Harper & Brothers, New York, and placed on our table by Grigg & Elliott of this city. Its title conveys a just idea of its contents, and from the hasty glance we have given it, and the knowledge we have of the writer, we have no doubt it will prove a valuable auxiliary to those engaged in the business of sheep husbandry. The author states he has been a practical manager of sheep for many years, and is enthusiastically attached to the vocation. His affection for this domestic animal is greater than for any other, and he has studied its instincts and habits at all seasons, and under all circumstances, as well as shared with his labourers in every department of its management. What is offered therefore, is the result of the experience of a practical man.

The late Annual Exhibition of our Horticultural Society was as usual made attractive by the great variety of plants, vegetables and flowers of every description, that could please the eye of the common observer, or gratify the taste of the thoroughly instructed amateur. The arrangement of the articles throughout the magnificent rooms of the Museum building, were judiciously made, and during the three days, upwards of 15,000 persons witnessed the grand display.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable* and *Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by D. O. PROUTY.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels—$5 for three barrels—$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for wheat, &c.
JOSIAH TATUM.

Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

March 15th, 1845.

FRUIT AND ORNAMENTAL TREES, EVERGREENS, SHRUBBERY, &c.,

In great variety, for sale as heretofore, by the subscriber, at his Nursery, near Haddington, four miles west of Philadelphia. Orders sent by mail, or left at the office of the Farmers' Cabinet—where catalogues may be obtained—will be attended to, and the trees well packed when ordered to distant places. City gardeners supplied with trees suitable for the streets, at a liberal discount. SAMUEL RHOADS.

Tenth mo. 15th, 1845.

THE quantity of rain which fell during the Ninth month, 1845, was nearly two inches and a quarter. ..... 2.15 inches

Penn. Hospital, 10th mo. 1st.

LECTURES ON AGRICULTURAL CHEMISTRY:

By Alfred L. Kennedy, a member of the Philadelphia Agricultural Society.

A course of familiar Lectures, illustrated by experiments, specimens and diagrams, on those portions of Chemistry, Botany and Geology, which are applicable to agriculture, will be commenced early in November next, and continue semi-weekly until the latter part of February. The subjects treated, will be those most interesting and valuable to the *practical* agriculturist; and to those who are now learning, or about to learn the practice of the farm:—the economy of animal, mineral and vegetable manures, their action on siliceous, argillaceous and calcareous soils, analyses of soils, structure of plants, drainage, irrigation, &c.

Circulars containing a synopsis of the course, time of delivery, terms, &c., may be obtained at this office.

Philada. October 15th, 1845. 2t.

GUANO.

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by
S. & J. J. ALLEN & CO.,
No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845. 6t.

THE fourth part of *Colman's Agricultural Tour* is published, and will be forwarded to our subscribers as soon as the numbers are received. We give a graphic and amusing extract from it, describing one of the accompaniments of the Galway Fair, in Ireland.

THE Lectures advertised by A. L. Kennedy, will afford facilities for acquiring a certain kind of valuable information, that has been heretofore hardly offered to farmers of this vicinity, or to young men who would make themselves acquainted with those portions of Chemistry, Botany and Geology, which are every day applicable to agriculture.

THE October number of the *Farmers' Library* comes to us filled with information which we could wish every farmer would avail himself of. It contains also a beautiful, lithographed likeness of Liebig. This will be particularly acceptable to the thousands with whom his name is so familiar.

THE fourth number of the *Pennsylvania Journal of Prison Discipline and Philanthropy*, published from this office, has just made its appearance. Like the numbers which have preceded it, it is filled with matter highly interesting and important to the philanthropist, and to those who are active in framing, or administering the provisions of the penal code.

☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	60
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion.	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
BEVAN on the HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., March 15th. tf.

COATES' SEED STORE,

No. 49 Market Street.

FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GRASS & GARDEN SEEDS,

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Joseph Rakestraw, Printer